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LOGINID:ssptacrs1614

PASSWORD:

TERMINAL (ENTER 1, 2, 3, OR ?):2

* * * * * * * * * * * * Welcome to STN International * * * * * * * * *

NEWS 1 Web Page for STN Seminar Schedule - N. America
NEWS 2 AUG 06 CAS REGISTRY enhanced with new experimental property tags
NEWS 3 AUG 06 FSTA enhanced with new thesaurus edition
NEWS 4 AUG 13 CA/Caplus enhanced with additional kind codes for granted patents
NEWS 5 AUG 20 CA/Caplus enhanced with CAS indexing in pre-1907 records
NEWS 6 AUG 27 Full-text patent databases enhanced with predefined patent family display formats from INPADOCDB
NEWS 7 AUG 27 USPATOLD now available on STN
NEWS 8 AUG 28 CAS REGISTRY enhanced with additional experimental spectral property data
NEWS 9 SEP 07 STN AnaVist, Version 2.0, now available with Derwent World Patents Index
NEWS 10 SEP 13 FORIS renamed to SOFIS
NEWS 11 SEP 13 INPADOCDB enhanced with monthly SDI frequency
NEWS 12 SEP 17 CA/Caplus enhanced with printed CA page images from 1967-1998
NEWS 13 SEP 17 Caplus coverage extended to include traditional medicine patents
NEWS 14 SEP 24 EMBASE, EMBAL, and LEMBASE reloaded with enhancements
NEWS 15 OCT 02 CA/Caplus enhanced with pre-1907 records from Chemisches Zentralblatt
NEWS 16 OCT 19 BEILSTEIN updated with new compounds
NEWS 17 NOV 15 Derwent Indian patent publication number format enhanced
NEWS 18 NOV 19 WPIX enhanced with XML display format
NEWS 19 NOV 30 ICSD reloaded with enhancements
NEWS 20 DEC 04 LINPADOCDB now available on STN
NEWS 21 DEC 14 BEILSTEIN pricing structure to change
NEWS 22 DEC 17 USPATOLD added to additional database clusters
NEWS 23 DEC 17 IMSDRUGCONF removed from database clusters and STN
NEWS 24 DEC 17 DGENE now includes more than 10 million sequences
NEWS 25 DEC 17 TOXCENTER enhanced with 2008 MeSH vocabulary in MEDLINE segment
NEWS 26 DEC 17 MEDLINE and LMEDLINE updated with 2008 MeSH vocabulary
NEWS 27 DEC 17 CA/Caplus enhanced with new custom IPC display formats
NEWS 28 DEC 17 STN Viewer enhanced with full-text patent content from USPATOLD
NEWS 29 JAN 02 STN pricing information for 2008 now available
NEWS 30 JAN 16 CAS patent coverage enhanced to include exemplified prophetic substances
NEWS 31 JAN 28 USPATFULL, USPAT2, and USPATOLD enhanced with new custom IPC display formats
NEWS 32 JAN 28 MARPAT searching enhanced
NEWS 33 JAN 28 USGENE now provides USPTO sequence data within 3 days of publication
NEWS 34 JAN 28 TOXCENTER enhanced with reloaded MEDLINE segment

NEWS 35 JAN 28 MEDLINE and LMEDLINE reloaded with enhancements
NEWS 36 FEB 08 STN Express, Version 8.3, now available

NEWS EXPRESS FEBRUARY 08 CURRENT WINDOWS VERSION IS V8.3,
AND CURRENT DISCOVER FILE IS DATED 24 JANUARY 2008

NEWS HOURS STN Operating Hours Plus Help Desk Availability
NEWS LOGIN Welcome Banner and News Items
NEWS IPC8 For general information regarding STN implementation of IPC 8

Enter NEWS followed by the item number or name to see news on that specific topic.

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FILE 'HOME' ENTERED AT 09:04:13 ON 20 FEB 2008

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=> file registry
COST IN U.S. DOLLARS          SINCE FILE      TOTAL
                               ENTRY           SESSIONS
FULL ESTIMATED COST          -0.21          0.21

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FILE 'REGISTRY' ENTERED AT 09:04:24 ON 20 FEB 2008
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STRUCTURE FILE UPDATES: 19 FEB 2008 HIGHEST RN 1004621-14-0
DICTIONARY FILE UPDATES: 19 FEB 2008 HIGHEST RN 1004621-14-0

New CAS Information Use Policies - enter HELP USAGETERMS for details

TSCA INFORMATION NOW CURRENT THROUGH January 9, 2008

Please note that search-term pricing does apply when conducting Smart SELECT searches.

REGISTRY includes numerically searchable data for experimental and predicted properties as well as tags indicating availability of experimental property data in the original document. For information on property searching in REGISTRY, refer to:

<http://www-cas.org/support/stngen/stndoc/properties.html>

=> file registry
 COST IN U.S. DOLLARS

| | SINCE FILE | TOTAL |
|---------------------|------------|----------|
| | ENTRY | SESSIONS |
| FULL ESTIMATED COST | 0.46 | 0.46 |

FILE 'REGISTRY' ENTERED AT 09:04:55 ON 20 FEB 2008
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STRUCTURE FILE UPDATES: 19 FEB 2008 HIGHEST RN 1004621-14-0
DICTIONARY FILE UPDATES: 19 FEB 2008 HIGHEST RN 1004621-14-0

New CAS Information Use Policies, enter HELP USAGETERMS for details.

TSCA INFORMATION NOW CURRENT THROUGH January 9, 2008.

Please note that search-term pricing does apply when conducting SmartSELECT searches.

REGISTRY includes numerically searchable data for experimental and predicted properties as well as tags indicating availability of experimental property data in the original document. For information on property searching in REGISTRY, refer to:

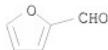
<http://www.cas.org/support/stndoc/properties.html>

```
=> e hydroxymethylfurfural
E1      1    HYDROXYMETHYLFURATRIZINE/BI
E2      3    HYDROXYMETHYLFURFUR/BI
E3      2 --> HYDROXYMETHYLFURFURAL/BI
E4      1    HYDROXYMETHYLFURFURALALDEHYDE/BI
E5      1    HYDROXYMETHYLFURFURALDEHYDE/BI
E6      1    HYDROXYMETHYLFURFUROL/BI
E7      1    HYDROXYMETHYLFURFURYL/BI
E8      1    HYDROXYMETHYLFURME/BI
E9      1    HYDROXYMETHYLFRUMETHI/BI
E10     1    HYDROXYMETHYLFRUMETHIDE/BI
E11     2    HYDROXYMETHYLFURO/BI
E12     1    HYDROXYMETHYLGUTAM/BI

=> s e3
L1      2 HYDROXYMETHYLFURFURAL/BI

=> d 11 1-2

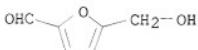
L1  ANSWER 1 OF 2  REGISTRY  COPYRIGHT 2008 ACS on STN
RN  25376-49-2  REGISTRY
ED  Entered STN: 16 Nov 1984
CN  2-Furancarboxaldehyde, (hydroxymethyl)- (9CI)  (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN  2-Furaldehyde, (hydroxymethyl)- (7CI, 8CI)
OTHER NAMES:
CN  Hydroxymethylfurfural
MF  C6 H6 O3
CI  IDS, COM
LC  STN Files: AGRICOLA, ANABSTR, BIOSIS, BIOTECHNO, CA, CAOLD, CAPLUS,
     CASREACT, DDFU, DETHERM*, DRUGU, EMBASE, IPA, PIRA, PROMT, TOXCENTER,
     USPATOLE
(*File contains numerically searchable property data)
```



D1-CH₂-OH

333 REFERENCES IN FILE CA (1907 TO DATE)
1 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
333 REFERENCES IN FILE CAPLUS (1907 TO DATE)
17 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

L1 ANSWER 2 OF 2 REGISTRY COPYRIGHT 2008 ACS on STN
RN 67-47-0 REGISTRY
ED Entered STN: 16 Nov 1984
CN 2-Furancarboxaldehyde, 5-(hydroxymethyl)- (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN 2-Furaldehyde, 5-(hydroxymethyl)- (8CI)
OTHER NAMES:
CN 2-Hydroxymethyl-5-furfural
CN 5-(Hydroxymethyl)-2-furaldehyde
CN 5-(Hydroxymethyl)-2-furancarbonal
CN 5-(Hydroxymethyl)-2-furancarboxaldehyde
CN 5-(Hydroxymethyl)-2-furfural
CN 5-(Hydroxymethyl)-2-furfuraldehyde
CN 5-(Hydroxymethyl)furfural
CN 5-Hydroxymethyl-2-formylfuran
CN 5-Hydroxymethylfuraldehyde
CN 5-Hydroxymethylfuran-2-aldehyde
CN 5-Hydroxymethylfurfuraldehyde
CN 5-Hydroxymethylfurfurrol
CN 5-Oxymethylfurfurole
CN HMF
CN Hydroxymethylfurfural
CN Hydroxymethylfurfuralaldehyde
CN Hydroxymethylfurfuralaldehyde
CN NSC 40738
DR 76330-16-0
MF C6 H6 O3
CI COM
LC STN Files: AGRICOLA, ANABSTR, AQUIRE, BEILSTEIN*, BIOSIS, BIOTECHNO, CA,
CABA, CAOLD, CAPLUS, CASREACT, CBNB, CHEMCATS, CHEMINFORMRX, CHEMLIST,
CIN, CSCHEM, CSNB, EMBASE, GMELIN*, IFICDB, IFIPAT, IFIUDB, IPA,
MEDLINE, MRCK*, NAPRALERT, PIRA, PROMT, RTECS*, SPECINFO, TOXCENTER,
USPAT2, USPATFULL, USPATOLD
(*File contains numerically searchable property data)
Other Sources: DSL**, EINECS**, TSCA**
(**Enter CHEMLIST File for up-to-date regulatory information)



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

3100 REFERENCES IN FILE CA (1907 TO DATE)

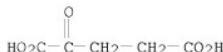
36 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
3109 REFERENCES IN FILE CAPLUS (1907 TO DATE)
51 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

=> e alphaketoglutaric
E1 1 ALPHAIV/BI
E2 1 ALPHAJEL/BI
E3 0 --> ALPHAKETOGLUTARIC/BI
E4 1 ALPHAKIL/BI
E5 3 ALPHAL/BI
E6 2 ALPHALB/BI
E7 1 ALPHALIN/BI
E8 2 ALPHALOY/BI
E9 1 ALPHALUX/BI
E10 4 ALPHAM/BI
E11 7 ALPHAMI/BI
E12 1 ALPHAMAL/BI

=> s 328-50-7
L2 1 328-50-7
(328-50-7/RN)

=> d

L2 ANSWER 1 OF 1 REGISTRY COPYRIGHT 2008 ACS on STN
RN 328-50-7 REGISTRY
ED Entered STN: 16 Nov 1984
CN Pentanedioic acid, 2-oxo- (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN Glutaric acid, 2-oxo- (8CI)
OTHER NAMES:
CN α-keto-Glutaric acid
CN α-Ketoglutaric acid
CN α-Oxoglutaric acid
CN α-Oxopentanedioic acid
CN 2-Ketoglutaric acid
CN 2-Oxo-1,5-pentanedioic acid
CN 2-Oxoglutaric acid
CN 2-Oxopentanedioic acid
CN NSC 17391
DR 27175-99-1
MF C5 H6 O5
CI COM
LC STN Files: AGRICOLA, ANABSTR, BEILSTEIN*, BIOSIS, BIOTECHNO, CA, CABA,
CAOLD, CAPLUS, CASREACT, CHEMCATS, CHEMINFORMRX, CHEMLIST, CSCHEM, CSNB,
DDFU, DETHERM*, DRUGU, EMBASE, IFICDB, IFIPAT, IFIUDB, IPA, MEDLINE,
MRCK*, MSDS-OHS, NAPRALERT, PROMT, RTECS*, SYNTHLINE, TOXCENTER, USPAT2,
USPATFULL, USPATOLD
(*File contains numerically searchable property data)
Other Sources: DSL**, EINECS**, TSCA**
(**Enter CHEMLIST File for up-to-date regulatory information)



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

8979 REFERENCES IN FILE CA (1907 TO DATE)
166 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
8997 REFERENCES IN FILE CAPLUS (1907 TO DATE)
15 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

=> e dehydroascorbic
E1 1 DEHYDROASCORBATE/BI
E2 124 DEHYDROASCORBATE/BI
E3 23 --> DEHYDROASCORBIC/BI
E4 1 DEHYDROASCRO/BI
E5 1 DEHYDROASCROBI/BI
E6 1 DEHYDROASCROBIC/BI
E7 3 DEHYDROASIMILO/BI
E8 3 DEHYDROASIMILOBI/BI
E9 3 DEHYDROASIMILOBINE/BI
E10 1 DEHYDROASPART/BI
E11 1 DEHYDROASPARTAME/BI
E12 2 DEHYDROASPARTIC/BI

=> s e3
L3 23 DEHYDROASCORBIC/BI

=> file caplus
COST IN U.S. DOLLARS SINCE FILE TOTAL
ENTRY SESSION
FULL ESTIMATED COST 18.60 19.27

FILE 'CAPLUS' ENTERED AT 09:08:09 ON 20 FEB 2008
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FILE COVERS 1907 - 20 Feb 2008 VOL 148 ISS 8
FILE LAST UPDATED: 19 Feb 2008 (20080219/ED)

Effective October 17, 2005, revised CAS Information Use Policies apply.
They are available for your review at:

<http://www.cas.org/infopolicy.html>

=> s (11 or hmf of hydroxymethylfurfur?) and (12 or ketoglut?) and ?methionine
3362 L1
1257 HMF
29 HMFS
1275 HMF
(HMF OR HMFS)
2447 HYDROXYMETHYLFURFUR?
17 HMF OF HYDROXYMETHYLFURFUR?

(HMF (1W) HYDROXYMETHYLFURFUR?)

8997 L2
 13225 KETOGLUT?
 101086 ?METHIONINE
 L4 1 (L1 OR HMF OF HYDROXYMETHYLFURFUR?) AND (L2 OR KETOGLUT?) AND
 ?METHIONINE

=> d 14

L4 ANSWER 1 OF 1 CAPLUS COPYRIGHT 2008 ACS on STN
 AN 2004:467738 CAPLUS
 DN 141:17591
 TI Agent having a destructive effect on malignant tumors and method for the production
 IN Groke, Karl; Herwig, Ralf
 PA C.Y.L. Handelsges. m.b.H., Austria; Ferdinand, Peter
 SO PCT Int. Appl., 35 pp.
 CODEN: PIXXD2
 DT Patent
 LA German
 FAN.CNT 1

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|--|--|----------|-----------------|----------|
| PI WO 2004047832 | A1 | 20040610 | WO 2003-EP50712 | 20031013 |
| W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN,
CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE,
GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KE, KR, KZ, LC, LK,
LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ,
OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM,
TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW | | | | |
| RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY,
KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES,
FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR,
BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG | | | | |
| AT 2002001778 | A | 20040815 | AT 2002-1778 | 20021127 |
| AT 412447 | B | 20050325 | | |
| CA 2507273 | A1 | 20040610 | CA 2003-2507273 | 20031013 |
| AU 2003285351 | A1 | 20040618 | AU 2003-285351 | 20031013 |
| EP 1565176 | A1 | 20050824 | EP 2003-778338 | 20031013 |
| EP 1565176 | B1 | 20060524 | | |
| R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,
IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK | | | | |
| JP 2006508998 | T | 20060316 | JP 2004-554531 | 20031013 |
| AT 326958 | T | 20060615 | AT 2003-778338 | 20031013 |
| PT 1565176 | T | 20061031 | PT 2003-778338 | 20031013 |
| ES 2268452 | T3 | 20070316 | ES 2003-778338 | 20031013 |
| US 2006292218 | A1 | 20061228 | US 2006-536777 | 20060907 |
| PRAI AT 2002-1778 | A | 20021127 | | |
| EP 2003-778338 | A | 20031013 | | |
| WO 2003-EP50712 | W | 20031013 | | |
| RE.CNT 4 | THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT | | | |

=> s (l1 or hmf of hydroxymethylfurfur?) and (l2 or ketoglut?)
 3362 L1
 1257 HMF
 29 HMFS
 1275 HMF
 (HMF OR HMFS)
 2447 HYDROXYMETHYLFURFUR?
 17 HMF OF HYDROXYMETHYLFURFUR?

(HMF (1W) HYDROXYMETHYLFURFUR?)

8997 L2
13225 KETOGLUT?

L5 10 (L1 OR HMF OF HYDROXYMETHYLFURFUR?) AND (L2 OR KETOGLUT?)

=> d 15 ibib abs 1-10

L5 ANSWER 1 OF 10 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 2007:1140948 CAPLUS
DOCUMENT NUMBER: 147:420129
TITLE: Use of α -ketoglutaric acid and
5-hydroxymethylfurfural for reducing oxidative stress
INVENTOR(S): Moser, Peter Michael; Greilberger, Joachim; Maier,
Alfred; Juan, Heinz; Buecherl-Harrer, Christian;
Kager, Ernst
PATENT ASSIGNEE(S): C.Y.L. Pharmazeutika GmbH, Austria
SOURCE: Eur. Pat. Appl., 7pp.
CODEN: EPXXDW
DOCUMENT TYPE: Patent
LANGUAGE: German
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|--|---|-----------------|------------|
| EP 1842536 | A1 | 20071010 | EP 2007-104493 | 20070320 |
| R: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE,
IS, IT, LI, LT, LU, LV, MC, MT, NL, PL, PT, RO, SE, SI, SK, TR,
AL, BA, HR, MK, YU | | | | |
| AT 503385 | A1 | 20071015 | AT 2006-464 | 20060320 |
| PRIORITY APPLN. INFO.: | | | AT 2006-464 | A 20060320 |
| AB | The invention discloses the use of α -ketoglutaric acid and
5-hydroxymethylfurfural for the preparation of a medicament for the treatment
and prevention of oxidative stress in humans and animals, particularly for
the reduction of reactive oxygen and nitrogen species and simultaneously
increasing antioxidant capacity. The compds. of the invention can be used
for the improvement of general conditions and improving performance. | | | |
| REFERENCE COUNT: | 5 | THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS
RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT | | |

L5 ANSWER 2 OF 10 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 2007:758613 CAPLUS
DOCUMENT NUMBER: 147:197593
TITLE: Using tolerance intervals in pre-study validation of
analytical methods to predict in-study results
AUTHOR(S): Rozet, Eric; Hubert, Cedric; Ceccato, Attilio; Dewe,
Waltherie; Ziemons, Eric; Moonen, Francois; Michail,
Karim; Wintersteiger, Reinhold; Streel, Bruno;
Boulanger, Bruno; Hubert, Philippe
CORPORATE SOURCE: Laboratory of Analytical Chemistry, Bioanalytical
Chemistry Research Unit, Institute of Pharmacy, CHU,
University of Liege, Liege, B-4000, Belg.
SOURCE: Journal of Chromatography, A (2007), 1158(1-2),
126-137
CODEN: JCRAEY; ISSN: 0021-9673
PUBLISHER: Elsevier B.V.
DOCUMENT TYPE: Journal
LANGUAGE: English
AB It is recognized that the purpose of validation of anal. methods is to
demonstrate that the method is suited for its intended purpose.
Validation is not only required by regulatory authorities, but is also a
decisive phase before the routine use of the method. For a quant. anal.

method the objective is to quantify the target analytes with a known and suitable accuracy. For that purpose, first, a decision about the validity of the method based on prediction is proposed: a method is declared proper for routine application if it is considered that most of the future results generated will be accurate enough. This can be achieved by the " β -expectation tolerance interval" (accuracy profile) as the decision tool to assess the validity of the anal. method. Moreover, the concept of "fit-for-purpose" is also proposed here to select the most relevant response function as calibration curve, i.e. choosing a response function based solely on the predicted results this model will allow to obtain. This paper reports 4 case studies where the results obtained with quality control samples in routine were compared to predictions made in the validation phase. Predictions made using the " β -expectation tolerance interval" are shown to be accurate and trustful for decision making. It is therefore suggested that an adequate way to conciliate both the objectives of the anal. method in routine anal. and those of the validation step consists in taking the decision about the validity of the anal. method based on prediction of the future results using the most appropriate response function curve, i.e. the fit-for-future-purpose concept.

REFERENCE COUNT: 21 THERE ARE 21 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 3 OF 10 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 2006:1326164 CAPLUS

DOCUMENT NUMBER: 146:134507

TITLE: Development and validation of a liquid chromatographic method for the determination of hydroxymethylfurfural and alpha-ketoglutaric acid in human plasma

AUTHOR(S): Michail, K.; Juan, H.; Maier, A.; Matzi, V.; Greilberger, J.; Wintersteiger, R.

CORPORATE SOURCE: Institute of Pharmaceutical Sciences, University of Graz, Austria

SOURCE: Analytica Chimica Acta (2007), 581(2), 287-297
CODEN: ACACAM; ISSN: 0003-2670

PUBLISHER: Elsevier B.V.

DOCUMENT TYPE: Journal

LANGUAGE: English

AB Hydroxymethylfurfural (HMF) and alpha-ketoglutaric acid (KG) have been recently investigated as potential cancer cell damaging agents. We herein report for the first time a validated quant. assay for their simultaneous determination in human plasma which is amenable to be applied in

the future screening of the target compds. in human probands in order to properly design a targeted chemotherapeutic regimen for certain types of malignant tumors. A simple liquid chromatog. method in conjunction to derivatization after a two-step optimized solid phase clean-up procedure is described. The method is based on the reaction of HMF and KG with 2-nitrophenylhydrazine or 2,4-dinitrophenylhydrazine in an aqueous environment. Reaction conditions were studied with respect to pH, reagent volume, reaction temperature and time. Exact testing of such parameters beside careful selection of the mobile phase composition rendered feasible the quantification of the chemical significantly differing analytes along a single chromatog. run. The formed derivs. could be separated isocratically by reversed-phase LC on a C8-column. Detection in the UV and in the visible range is possible. Results showed good recovery and reproducibility with detection limits ($S/N = 3$) down to 2 pmol analyte on column. Resolution of the syn and anti geometric isomers of the HMF and KG derivs. is possible. The isomeric ratio in relation to the reaction pH is discussed.

REFERENCE COUNT: 46 THERE ARE 46 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 4 OF 10 CAPLUS COPYRIGHT 2008 ACS on STN
 ACCESSION NUMBER: 2004:467738 CAPLUS
 DOCUMENT NUMBER: 141:17591
 TITLE: Agent having a destructive effect on malignant tumors
 and method for the production
 INVENTOR(S): Groke, Karl; Herwig, Ralf
 PATENT ASSIGNEE(S): C.Y.L. Handelsges. m.b.H., Austria; Ferdinand, Peter
 SOURCE: PCT Int. Appl., 35 pp.
 CODEN: PIXXD2
 DOCUMENT TYPE: Patent
 LANGUAGE: German
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|------|----------|----------------------------|----------|
| WO 2004047832 | A1 | 20040610 | WO 2003-EP50712 | 20031013 |
| W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW | | | | |
| RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG | | | | |
| AT 2002001778 | A | 20040815 | AT 2002-1778 | 20021127 |
| AT 412447 | B | 20050325 | | |
| CA 2507273 | A1 | 20040610 | CA 2003-2507273 | 20031013 |
| AU 2003285351 | A1 | 20040618 | AU 2003-285351 | 20031013 |
| EP 1565176 | A1 | 20050824 | EP 2003-778338 | 20031013 |
| EP 1565176 | B1 | 20060524 | | |
| R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK | | | | |
| JP 2006508998 | T | 20060316 | JP 2004-554531 | 20031013 |
| AT 326958 | T | 20060615 | AT 2003-778338 | 20031013 |
| PT 1565176 | T | 20061031 | PT 2003-778338 | 20031013 |
| ES 2268452 | T3 | 20070316 | ES 2003-778338 | 20031013 |
| US 2006292218 | A1 | 20061228 | US 2006-536777 | 20060907 |
| PRIORITY APPLN. INFO.: | | | AT 2002-1778 A 20021127 | |
| | | | EP 2003-778338 A 20031013 | |
| | | | WO 2003-EP50712 W 20031013 | |

AB Disclosed is an agent which has a destructive effect on malignant tumors and contains alpha-ketoglutaric acid, N-acetyl-seleno-L-methionine, N-acetyl-L-methionine, and a compound that is capable of forming azomethine and is selected among the group 5-hydroxymethylfurfural, dehydroascorbic acid, maltol, and vanillin as an active substance, 5-hydroxymethylfurfural being preferred. The inventive agent can be used in the form of an infusion, in an oral or rectal form of administration, or as an irrigation in cancer therapy. The treatment of cancer patients with the following infusion solution is reported: α -ketoglutaric acid 9.0 g/L; 5-hydroxymethyl furfural 3.0 g/L; N-acetyl-seleno-L-methionine 2.0 mg/L; N-acetyl-L-methionine 100.00 mg/L; glucose 30.0 g/L; sodium and potassium ions to set pH.

REFERENCE COUNT: 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 5 OF 10 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 2003:909147 CAPLUS

DOCUMENT NUMBER: 139:369764

TITLE: Composition for the treatment of alcohol and smoking

dependence using 5-hydroxymethylfurfural-containing
 drinks
 INVENTOR(S): Groke, Karl; Kager, Ernst; Buecherl, Christian
 PATENT ASSIGNEE(S): Austria
 SOURCE: Eur. Pat. Appl., 4 pp.
 CODEN: EPXXDW
 DOCUMENT TYPE: Patent
 LANGUAGE: German
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|--|------|----------|-----------------|------------|
| EP 1362586 | A1 | 20031119 | EP 2003-450035 | 20030205 |
| EP 1362586 | B1 | 20050907 | | |
| R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,
IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK | | | | |
| AT 2002000764 | A | 20031015 | AT 2002-764 | 20020517 |
| AT 411730 | B | 20040525 | | |
| AT 303806 | T | 20050915 | AT 2003-450035 | 20030205 |
| ES 2252651 | T3 | 20060516 | ES 2003-450035 | 20030205 |
| CA 2486298 | A1 | 20031127 | CA 2003-2486298 | 20030515 |
| WO 2003097032 | A1 | 20031127 | WO 2003-AT140 | 20030515 |
| W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN,
CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH,
GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR,
LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM,
PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT,
TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW | | | | |
| RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY,
KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES,
FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR,
BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG | | | | |
| AU 2003232906 | A1 | 20031202 | AU 2003-232906 | 20030515 |
| JP 200528419 | T | 20050922 | JP 2004-505031 | 20030515 |
| US 2005274391 | A1 | 20051215 | US 2005-514775 | 20050113 |
| PRIORITY APPLN. INFO.: | | | AT 2002-764 | A 20020517 |
| | | | EP 2003-450035 | A 20030205 |
| | | | WO 2003-AT140 | W 20030515 |

AB The invention concerns the treatment of alc. and smoking dependence by administering a drink that contains per L (g): α-ketoglutaric acid 4-8; 5-hydroxymethylfurfural 0.2-0.6; saccharose 20-40; sodium bicarbonate 2.5-5.0; sorbic acid 0.3-0.8; optionally citric acid 0.5.

REFERENCE COUNT: 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 6 OF 10 CAPLUS COPYRIGHT 2008 ACS on STN
 ACCESSION NUMBER: 1998:512775 CAPLUS
 DOCUMENT NUMBER: 129:148301
 TITLE: Volatile Compounds Involved in the Aroma of Sweet Fortified Wines (Vins Doux Naturels) from Grenache Noir
 AUTHOR(S): Schneider, R.; Baumes, R.; Bayonove, C.; Razungles, A.
 CORPORATE SOURCE: Laboratoire des Aromes et Substances Naturelles, IPV-ENSAIM-INRA, Montpellier, 34060, Fr.
 SOURCE: Journal of Agricultural and Food Chemistry (1998), 46(8), 3230-3237
 CODEN: JAFCAU; ISSN: 0021-8561
 PUBLISHER: American Chemical Society
 DOCUMENT TYPE: Journal
 LANGUAGE: English

AB A typical com. sample of red Vins Doux Naturels (VDN), Maury 1991, was analyzed by liquid-liquid extraction with dichloromethane followed by chromatog.
anal. by GC/FID, GC/MS, and GC/sniffing. GC/sniffing using a DB-Wax and a DB-5 fused silica capillary column revealed five substances having odors corresponding to the aromas of these sweet fortified wines: an enolic lactone, 3-hydroxy-4,5-dimethyl-2(5H)-furanone or sotolone; an acetal, trans-2-methyl-5-hydroxy-1,3-dioxane; and three Et esters, 4-carbethoxy- β -butyrolactone, Et 2-hydroxyglutarate, and Et pyroglutamate. The last four compds. were synthesized and their olfactory characteristics checked under the same conditions, which confirmed the odors revealed for the natural compds. except for trans-2-methyl-5-hydroxy-1,3-dioxane, which exhibited no odor. Furthermore, five other sweet fortified wines subjected to different types of oxidative aging were analyzed to quant. determine the four identified aroma compds. The three Et esters were found in these wines at different levels increasing with oxidative aging. However, sotolone could not be detected. In addition, other volatile compds. from the six wines were analyzed. The levels of polar Et esters and the related lactones, the carbonyl compds., and their acetals increased in the wines after oxidative aging as well.

REFERENCE COUNT: 29 THERE ARE 29 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 7 OF 10 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 1985:77413 CAPLUS
DOCUMENT NUMBER: 102:77413
ORIGINAL REFERENCE NO.: 102:12135a,12138a
TITLE: Polar carbonyls in cow and buffalo ghee
AUTHOR(S): Rao, D. Vijayender; Ramamurthy, M. K.
CORPORATE SOURCE: Southern Reg. Stn., Natl. Dairy Res. Inst., Bangalore,
560030, India
SOURCE: Indian Journal of Dairy Science (1984), 37(2), 98-102
DOCUMENT TYPE: CODEN: IJDSAI; ISSN: 0019-5146
LANGUAGE: Journal English

AB Polar carbonyls (PC) were isolated as their 2,4-DNP hydrazone from ghee and estimated Ghee prepared at clarification temps. of 100° and 120° for 10 min. contained .apprx.1.9 and 31.5 mg of PC resp. in the case of fresh cream, 6.1 and 75.8 mg in the case of acid cream, and 1.4 and 3.2 mg/100 g ghee in the case of butter. Sepns. of 2,4-DNP hydrazone of total PC of ghee clarified at 100° by TLC showed 6 components. Three of them were tentatively identified as diacetyl [431-03-8], methyl glyoxal [78-98-8], and α -ketoglutaric acid [328-50-7]. The PC of ghee clarified at 120° showed 10 components. Among them, in addition to the 3 above were, furfural [98-01-1] and hydroxy Me furfural [25376-49-2] were also tentatively identified.

L5 ANSWER 8 OF 10 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 1984:185071 CAPLUS
DOCUMENT NUMBER: 100:185071
ORIGINAL REFERENCE NO.: 100:28001a,28004a
TITLE: High-performance liquid chromatographic elution behavior of alcohols, aldehydes, ketones, organic acids and carbohydrates on a strong cation-exchange stationary phase
AUTHOR(S): Pecina, R.; Bonn, G.; Burtscher, E.; Bobleter, O.
CORPORATE SOURCE: Inst. Radiochem., Univ. Innsbruck, Innsbruck, Austria
SOURCE: Journal of Chromatography (1984), 287(2), 245-58
DOCUMENT TYPE: CODEN: JOCRAM; ISSN: 0021-9673
LANGUAGE: Journal English

AB The high-performance liquid chromatog. separation of alcs., aldehydes, ketones, carboxylic acids, and carbohydrates on a polystyrene-based strong cation-exchange resin is described. The column temperature was a very important parameter for optimizing sepn's. of these substances. The effect of different functional groups on the elution behavior is discussed.

L5 ANSWER 9 OF 10 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 1981:548868 CAPLUS
DOCUMENT NUMBER: 95:148868
ORIGINAL REFERENCE NO.: 95:24905a,24908a
TITLE: Aroma of Balady bread. 1. Determination of carbonyl components
AUTHOR(S): El-Samahy, S. K.; Elias, A. N.; Askar, A.
CORPORATE SOURCE: Fac. Agric., Univ. Zagazig, Zagazig, Egypt
SOURCE: Getreide, Mehl und Brot (1981), 35(7), 182-4
CODEN: GEMBAN; ISSN: 0367-4177
DOCUMENT TYPE: Journal
LANGUAGE: German

AB Balady bread, fermented dough, and dough fresh from mixing were homogenized with H₂O (200 g in 200 mL), extracted with CHCl₃, treated with 2,4-dinitrophenylhydrazine in 2N HCl to derivatize the carbonyls, and the dinitrophenylhydrazones were separated by paper chromatog. The carbonyl compds. were determined by reaction gas chromatog. with α -ketoglutaric acid at 250° to liberate free carbonyls in the precolumn for separation on a 20% Carbowax 20M on Chromosorb P (35-80 mesh) column. Fourteen of the 27 compds. separated were identified, 12 aldehydes and 2 ketones. Most of the carbonyls formed during dough fermentation Two unidentified compds. were >63% of the carbonyls in unfermented dough, one of which increased to 48% of the total and the other nearly disappeared during fermentation; both compds. were absent from bread. The major carbonyls in baked bread were propanal [123-38-6], acetone [67-64-1], and 2-methylpentanal [123-15-9].

L5 ANSWER 10 OF 10 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 1964:457866 CAPLUS
DOCUMENT NUMBER: 61:57866
ORIGINAL REFERENCE NO.: 61:10047c-f
TITLE: Determination of furan aldehydes. Reaction with aniline in acetic and hydrochloric acid solutions
AUTHOR(S): Friedemann, Theodore E.; Keegan, Patricia K.; Witt, Norman F.
CORPORATE SOURCE: Univ. of Colorado, Boulder
SOURCE: Analytical Biochemistry (1964), 8(3), 300-11
CODEN: ANBCA2; ISSN: 0003-2697
DOCUMENT TYPE: Journal
LANGUAGE: Unavailable

AB Procedures are described for the spectrophotometric determination of 1-7 γ furfural, methylfurfural (MF), and (hydroxymethyl)furfural (HMF) per ml. solution by a combination of several methods: direct spectrophotometry, mixing equal vols. of sample solution and 10% PhNH₂ in 80% HOAc, and by mixing equal vols. of sample solution and 10% PhNH₂ in .apprx.0.9N excess HCl. Absorbances are determined at specified wavelengths, depending upon the type of sample analyzed. ϵ and λ maximum of furan aldehydes were determined under uniform conditions in 0.001N HCl: furfural, 3.54 + 103 at 229 m μ and 15.375 + 103 at 277 m μ ; MF, 2.98 + 103 at 228 m μ and 16.22 + 103 at 291.5 m μ ; HMF, 3.605 + 103 at 229 m μ and 16.75 + 103 at 284 m μ . Data were obtained under the same uniform conditions on furfuryl alc. furoic acid, furoin, furil, Me₂CO, acetol, methylglyoxal, pyruvic acid, levulinic acid, α -ketoglutaric acid, diacetyl, acetylacetone, and acetonylacetone. None of these compds., even if present in equimolar concentration, except furoin

and acetylacetone, interferes significantly in the determination of furan aldehydes. Reductic acid may interfere. At pH 7.4, ϵ was 20.705 + 103 at λ maximum 281 m μ ; in 0.0002-1.0N acid, ϵ and λ maximum were essentially unchanged, 13.79 + 103 (average) at 263 m μ . Oxidation to dehydroreductive acid completely removes the possible interference. The reaction with 10% PhNH₂ in 80% HOAc is highly sensitive for all 3 aldehydes. Furfural gave no absorption peak in the ultraviolet. The reaction with 10% PhNH₂ in HCl is also highly sensitive, especially for MF. ϵ and λ maximum were: for furfural, 7.575 + 103 352 m μ ; for MF, 11.75 + 103 at 370 m μ ; for HMF, 8.22 + 103 at 363 m μ . A distillation procedure is described for separating furfural and MF from HMF in which 98-99% furfural and MF, and less than 1% HMF, were recovered in the distillate.

=> s methionine (s) (cancer or tumor or neoplasm)
93475 METHIONINE
545 METHIONINES
93665 METHIONINE
(METHIONINE OR METHIONINES)
348164 CANCER
51197 CANCERS
361109 CANCER
(CANCER OR CANCERS)
440912 TUMOR
165946 TUMORS
492219 TUMOR
(TUMOR OR TUMORS)
483382 NEOPLASM
37012 NEOPLASMS
500298 NEOPLASM
(NEOPLASM OR NEOPLASMS)
L6 1415 METHIONINE (S) (CANCER OR TUMOR OR NEOPLASM)

=> s 16 and derivative
56250 DERIVATIVE
352679 DERIVATIVES
404710 DERIVATIVE
(DERIVATIVE OR DERIVATIVES)
656133 DERIV
1168486 DERIVS
1537343 DERIV
(DERIV OR DERIVS)
1642194 DERIVATIVE
(DERIVATIVE OR DERIV)
L7 122 L6 AND DERIVATIVE

=> d scan

L7 122 ANSWERS CAPLUS COPYRIGHT 2008 ACS on STN
IC ICM A61K037-14
INCL 514006000
CC 1-6 (Pharmacology)
Section cross-reference(s): 63
TI Method for the inhibition of the proliferation of cancer cells by injection into the tumor of a selenodithiol
ST selenodithiol cancer treatment; selenodiglutathione lung adenocarcinoma inhibition; neoplasm inhibitor selenodithioli
IT Neoplasm inhibitors
(selenodithiols as)
IT Lung, neoplasm

(adenocarcinoma, inhibitors, selenodithiols)
IT Neoplasm inhibitors
(colon adenocarcinoma, selenodithiols)
IT Intestine, neoplasm
(colon, adenocarcinoma, inhibitors, selenodithiols)
IT Thiols, compounds
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(di-, selenium complexes, neoplasm inhibitors)
IT Neoplasm inhibitors
(glioma, selenodithiols)
IT Skin
(keratinocyte, inhibitors of, selenodithiols as)
IT Neoplasm inhibitors
(lung adenocarcinoma, selenodithiols)
IT Neoplasm inhibitors
(mammary gland adenocarcinoma, selenodithiols)
IT Neoplasm inhibitors
(medulloblastoma, selenodithiols)
IT Brain, neoplasm
(medulloblastoma, inhibitors, selenodithiols)
IT Neoplasm inhibitors
(melanoma, selenodithiols)
IT Mammary gland
(neoplasm, adenocarcinoma, inhibitors, selenodithiols)
IT Neuroglia
(neoplasm, inhibitors, selenodithiols)
IT 63-68-3D, L-Methionine, selenium derivs. 7782-49-2D,
Selenium, methionine derivs. 20710-99-0,
Selenodicycsteine
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(neoplasm inhibitor)
IT 33944-90-0P, Selenodiglutathione
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of, for neoplasm inhibitor)
IT 10102-18-8, Sodium selenite
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction of, with reduced glutathione)
IT 70-18-8D, Glutathione, reduced
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction of, with sodium selenite)

HOW MANY MORE ANSWERS DO YOU WISH TO SCAN? (1):end

=> d his

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FILE 'REGISTRY' ENTERED AT 09:04:24 ON 20 FEB 2008

FILE 'REGISTRY' ENTERED AT 09:04:55 ON 20 FEB 2008
E HYDROXYMETHYLFURFURAL

L1 2 S E3
E ALPHAKETOGLUTARIC
L2 1 S 328-50-7
E DEHYDROASCORBIC
L3 23 S E3

FILE 'CAPLUS' ENTERED AT 09:08:09 ON 20 FEB 2008

L4 1 S (L1 OR HMF OF HYDROXYMETHYLFURFUR?) AND (L2 OR KETOGLUT?) AND
L5 10 S (L1 OR HMF OF HYDROXYMETHYLFURFUR?) AND (L2 OR KETOGLUT?)
L6 1415 S METHIONINE (S) (CANCER OR TUMOR OR NEOPLASM)
L7 122 S L6 AND DERIVATIVE

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NEWS 16 OCT 19 BEILSTEIN updated with new compounds
NEWS 17 NOV 15 Derwent Indian patent publication number format enhanced
NEWS 18 NOV 19 WPIX enhanced with XML display format
NEWS 19 NOV 30 ICSD reloaded with enhancements
NEWS 20 DEC 04 LINPADOCDB now available on STN

NEWS 21 DEC 14 BEILSTEIN pricing structure to change
NEWS 22 DEC 17 USPATOLD added to additional database clusters
NEWS 23 DEC 17 IMSDRUGCONF removed from database clusters and STN
NEWS 24 DEC 17 DGENE now includes more than 10 million sequences
NEWS 25 DEC 17 TOXCENTER enhanced with 2008 MeSH vocabulary in MEDLINE segment
NEWS 26 DEC 17 MEDLINE and LMEDLINE updated with 2008 MeSH vocabulary
NEWS 27 DEC 17 CA/Caplus enhanced with new custom IPC display formats
NEWS 28 DEC 17 STN Viewer enhanced with full-text patent content from USPATOLD
NEWS 29 JAN 02 STN pricing information for 2008 now available
NEWS 30 JAN 16 CAS patent coverage enhanced to include exemplified prophetic substances
NEWS 31 JAN 28 USPATFULL, USPAT2, and USPATOLD enhanced with new custom IPC display formats
NEWS 32 JAN 28 MARPAT searching enhanced
NEWS 33 JAN 28 USGENE now provides USPTO sequence data within 3 days of publication
NEWS 34 JAN 28 TOXCENTER enhanced with reloaded MEDLINE segment
NEWS 35 JAN 28 MEDLINE and LMEDLINE reloaded with enhancements
NEWS 36 FEB 08 STN Express, Version 8.3, now available

NEWS EXPRESS FEBRUARY 08 CURRENT WINDOWS VERSION IS V8.3,
AND CURRENT DISCOVER FILE IS DATED 24 JANUARY 2008

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<http://www.cas.org/support/stngen/stndoc/properties.html>

=> e acetylmethionine

| | | |
|-----|------|-----------------------------|
| E1 | 16 | ACETYL METHIONIN/BI |
| E2 | 16 | ACETYL METHIONINATO/BI |
| E3 | 29 | --> ACETYL METHIONINE/BI |
| E4 | 20 | ACETYL METHIONYL/BI |
| E5 | 49 | ACETYL METHOXY/BI |
| E6 | 32 | ACETYL METHOXYAMINO/BI |
| E7 | 1 | ACETYL METHOXYANOMONTINE/BI |
| E8 | 3 | ACETYL METHOXYBIS/BI |
| E9 | 1 | ACETYL METHOXYPHENYL/BI |
| E10 | 1 | ACETYL METHOXYTYR/BI |
| E11 | 1 | ACETYL METHOXYTYRAMINE/BI |
| E12 | 5397 | ACETYL METHYL/BI |

=> s e3

L1 29 ACETYL METHIONINE/BI

=> file caplus

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=> s 11 (s) (cancer or tumor or neoplasm)

| |
|---------------|
| 1042 L1 |
| 348164 CANCER |
| 51197 CANCERS |
| 361109 CANCER |

(CANCER OR CANCERS)

440912 TUMOR
 165946 TUMORS
 492219 TUMOR
 (TUMOR OR TUMORS)

483382 NEOPLASM
 37012 NEOPLASMS
 500298 NEOPLASM

(NEOPLASM OR NEOPLASMS)

L2 9 L1 (S) (CANCER OR TUMOR OR NEOPLASM)

=> d 12 ibib abs 1-9

L2 ANSWER 1 OF 9 CAPLUS COPYRIGHT 2008 ACS on STN
 ACCESSION NUMBER: 2007:117791 CAPLUS
 DOCUMENT NUMBER: 146:203915
 TITLE: Gene expression profile for diagnosing small cell lung cancer, discriminating from non-small cell lung cancer, and assessing chemotherapy-resistant lung cancer
 INVENTOR(S): Nakamura, Yusuke; Daigo, Yataro; Nakatsuru, Shuichi
 PATENT ASSIGNEE(S): Oncotherapy Science, Inc., Japan; The University of Tokyo
 SOURCE: PCT Int. Appl., 215pp.
 CODEN: PIXXD2
 DOCUMENT TYPE: Patent
 LANGUAGE: English
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|------|----------|------------------|----------|
| WO 2007013665 | A2 | 20070201 | WO 2006-JP315254 | 20060726 |
| WO 2007013665 | A3 | 20070705 | | |
| W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH,
CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD,
GE, GH, GM, HN, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP,
KR, KZ, LA, LC, LK, LR, LS, LT, LU, LV, LY, MA, MD, MG, MK, MN,
MW, MX, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RS, RU,
SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG,
US, UZ, VC, VN, ZA, ZM, ZW | | | | |
| RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE,
IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ,
CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH,
GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY,
KG, KZ, MD, RU, TJ, TM, AP, EA, EP, OA | | | | |

PRIORITY APPLN. INFO.: US 2005-703192P P 20050727
 US 2006-799961P P 20060511

AB Methods for detecting and diagnosing small cell lung cancer (SCLC) are described. In one embodiment, the diagnostic method involves determining the expression level of an SCLC-associated gene that discriminates between SCLC cells and normal cells. In another embodiment, the diagnostic method involves determining the expression level of an SCLC-associated gene that distinguishes two major histol. types of lung cancer, i.e., non-small cell lung cancer (NSCLC) and SCLC. Finally, the present invention provides methods of screening for therapeutic agents useful in the treatment of small cell lung cancer, methods of treating small cell lung cancer, and methods for vaccinating a subject against small cell lung cancer. Furthermore, the present invention provides chemotherapy-resistant lung cancer- or SCLC-associated genes as diagnostic markers and/or mol. targets for therapeutic agent for these cancers. These genes are up-regulated in chemoresistant lung cancer or SCLC. Accordingly, chemoresistant lung

cancer or SCLC can be predicted using expression level of the genes as diagnostic markers. As the result, any adverse effects caused by ineffective chemotherapy can be avoided, and more suitable and effective therapeutic strategy can be selected.

L2 ANSWER 2 OF 9 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 2007113586 CAPLUS
DOCUMENT NUMBER: 146:226597
TITLE: Gene expression profiles in esophageal cancer and their use in diagnosis, prognosis, therapy and drug design and selection
INVENTOR(S): Nakamura, Yusuke; Daigo, Yataro; Nakatsuru, Shuichi
PATENT ASSIGNEE(S): Oncotherapy Science, Inc., Japan; The University of Tokyo
SOURCE: PCT Int. Appl., 249pp.
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|------|----------|------------------|----------|
| WO 2007013671 | A2 | 20070201 | WO 2006-JP315342 | 20060726 |
| WO 2007013671 | A3 | 20070830 | | |
| W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HN, HR, HU, ID, IL, IN, IS, JE, KE, KG, KM, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LV, LY, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW | | | | |
| RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AP, EA, EP, OA | | | | |

PRIORITY APPLN. INFO.: US 2005-703263P P 20050727
AB In order to identify the mols. involved in esophageal carcinogenesis and those to be useful for diagnostic markers as well as targets for new drugs and immunotherapy, a cDNA microarray representing 32,256 genes was constructed to analyze the expression profiles of 19 esophageal squamous-cell carcinomas (ESCCS) purified by laser-capture microdissection. A detailed genome-wide database for sets of genes that are significantly up- or down-regulated in esophageal cancer is disclosed herein. These genes find use in the development of therapeutic drugs or immunotherapy as well as tumor markers. Addnl., genes associated with lymph-node metastasis and post-surgery recurrence are disclosed herein. Among the candidate mol. target genes, a Homo sapiens epithelial cell transforming sequence 2 oncogene (ECT2) and a cell division cycle 45, *S. cerevisiae*, homolog-like (CDC45L) are further characterized. Treatment of ESCC cells with small interfering RNAs (siRNAs) of ECT2 or CDC45L suppressed growth of the cancer cells. Thus, the data herein provide valuable information for identifying diagnostic systems and therapeutic target mols. for esophageal cancer. Furthermore, the present inventors have identified DKK1 as a potential biomarker for diagnosis of cancer such as lung and esophageal cancers as well as prediction of the poor prognosis of the patients with these diseases. DKK1 was specifically over-expressed in most lung and esophageal cancer tissues the present inventors examined, and was elevated in the sera of a large proportion of patients with these tumors. DKK1, combined with other tumor markers, could significantly improve the sensitivity of cancer diagnosis. Moreover, this mol. is also

a likely candidate for development of therapeutic approaches such as antibody therapy.

L2 ANSWER 3 OF 9 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 2006101948 CAPLUS
DOCUMENT NUMBER: 144:190130
TITLE: Genes showing altered expression in non-small cell lung cancers and their use in diagnosis
INVENTOR(S): Nakamura, Yusuke; Daigo, Yataro; Nakatsuru, Shuichi
PATENT ASSIGNEE(S): Oncotherapy Science, Inc., Japan; The University of Tokyo
SOURCE: U.S. Pat. Appl. Publ., 364 pp., Cont.-in-part of Appl. No. PCT/JP04/004075.
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 4
PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|------|----------|------------------|-------------|
| US 2006024692 | A1 | 20060202 | US 2005-90617 | 20050324 |
| WO 2004031413 | A2 | 20040415 | WO 2003-JP12072 | 20030922 |
| WO 2004031413 | A3 | 20050224 | | |
| WO 2004031413 | A9 | 20050804 | | |
| W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW | | | | |
| RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG | | | | |
| CN 1854313 | A | 20061101 | CN 2006-10073805 | 20030922 |
| EP 1743947 | A2 | 20070117 | EP 2006-22167 | 20030922 |
| EP 1743947 | A3 | 20070523 | | |
| R: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LI, LU, MC, NL, PT, RO, SE, SI, SK, TR | | | | |
| WO 200509091 | A1 | 20050929 | WO 2004-JP4075 | 20040324 |
| W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW | | | | |
| RW: BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG | | | | |
| EP 1730533 | A1 | 20061213 | EP 2004-723042 | 20040324 |
| R: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LI, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR | | | | |
| JP 2007530921 | T | 20071101 | JP 2006-529409 | 20040324 |
| PRIORITY APPLN. INFO.: | | | US 2002-414673P | P 20020930 |
| | | | US 2003-451374P | P 20030228 |
| | | | US 2003-466100P | P 20030428 |
| | | | WO 2003-JP312072 | A2 20030922 |
| | | | US 2004-555757P | P 20040324 |
| | | | WO 2004-JP4075 | A2 20040324 |

CN 2003-825506 A3 20030922
 EP 2003-753941 A3 20030922
 US 2004-555789P P 20040323

AB Genes that show altered levels of expression in non-small-cell lung cancer and that can be used to diagnose the disease are identified. The genes or gene products may also be targets for drugs for treatment of the disease. A group of approx. 1400 genes showing cancer-specific up- or downregulation is identified. Antisense nucleic acids and siRNAs are reported for some of these genes.

L2 ANSWER 4 OF 9 CAPLUS COPYRIGHT 2008 ACS on STN
 ACCESSION NUMBER: 2004:467738 CAPLUS
 DOCUMENT NUMBER: 14117591
 TITLE: Agent having a destructive effect on malignant tumors and method for the production
 INVENTOR(S): Groke, Karl; Herwig, Ralf
 PATENT ASSIGNEE(S): C.Y.L. Handelsges. m.b.H., Austria; Ferdinand, Peter
 SOURCE: PCT Int. Appl., 35 pp.
 CODEN: PIXXD2
 DOCUMENT TYPE: Patent
 LANGUAGE: German
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|------|-----------------|-----------------|----------|
| WO 2004047832 | A1 | 20040610 | WO 2003-EP50712 | 20031013 |
| W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW | | | | |
| RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG | | | | |
| AT 2002001778 | A | 20040815 | AT 2002-1778 | 20021127 |
| AT 412447 | B | 20050325 | | |
| CA 2507273 | A1 | 20040610 | CA 2003-2507273 | 20031013 |
| AU 2003285351 | A1 | 20040618 | AU 2003-285351 | 20031013 |
| EP 1565176 | A1 | 20050824 | EP 2003-778338 | 20031013 |
| EP 1565176 | B1 | 20060524 | | |
| R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IB, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK | | | | |
| JP 2006508998 | T | 20060316 | JP 2004-554531 | 20031013 |
| AT 326958 | T | 20060615 | AT 2003-778338 | 20031013 |
| PT 1565176 | T | 20061031 | PT 2003-778338 | 20031013 |
| ES 2268452 | T3 | 20070316 | ES 2003-778338 | 20031013 |
| US 2006292218 | A1 | 20061228 | US 2006-536777 | 20060907 |
| PRIORITY APPLN. INFO.: | | | | |
| | | AT 2002-1778 | A | 20021127 |
| | | EP 2003-778338 | A | 20031013 |
| | | WO 2003-EP50712 | W | 20031013 |

AB Disclosed is an agent which has a destructive effect on malignant tumors and contains alpha-ketoglutaric acid, N-acetyl-seleno-L-methionine, N-acetyl-L-methionine, and a compound that is capable of forming azomethine and is selected among the group 5-hydroxymethylfurfural, dehydroascorbic acid, maltol, and vanillin as an active substance, 5-hydroxymethylfurfural being preferred. The inventive agent can be used in the form of an infusion, in an oral or rectal form of administration, or as an irrigation in cancer therapy. The treatment of cancer patients with the following infusion solution is reported: α -ketoglutaric acid 9.0 g/L;

5-hydroxymethyl furfural 3.0 g/L; N-acetyl-seleno-L-methionine 2.0 mg/L;
N-acetyl-L-methionine 100.00 mg/L; glucose 30.0 g/L; sodium and potassium
ions to set pH.

REFERENCE COUNT: 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS
RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L2 ANSWER 5 OF 9 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1999:189901 CAPLUS

DOCUMENT NUMBER: 131:4137

TITLE: Identification of a second major tumor-specific
antigen recognized by CTLs on mouse mastocytoma P815

AUTHOR(S): Bilsborough, Janine; Van Pei, Aline; Uttenhove,
Catherine; Boon, Thierry; Van den Eynde, Benoit J.

CORPORATE SOURCE: Ludwig Institute for Cancer Research, Universite
Catholique de Louvain, Brussels, Belg.

SOURCE: Journal of Immunology (1999), 162(6), 3534-3540

CODEN: JOIMA3; ISSN: 0022-1767

PUBLISHER: American Association of Immunologists

DOCUMENT TYPE: Journal

LANGUAGE: English

AB Murine mastocytoma P815 induces CTL responses against at least four
distinct Ags (AB, C, D, and E). Recent studies have shown that the main
component of the CTL response against the P815 tumor is targeted against
Ag P815AB and P815E. The gene P1A has been well characterized. It
encodes the P815AB Ag in the form of a nonameric peptide containing two
epitopes, P815A and P815B, which are recognized by different CTLs. Here,
the authors report the identification of the P815E Ag. Using a cDNA
library derived from tumor P815, the authors identified the gene coding
for P815E. The authors also characterized the antigenic peptide that
anti-P815E CTLs recognize on the MHC class I mol. H-2Kd. The P815E Ag
results from a mutation within an ubiquitously expressed gene encoding
methionine sulfoxide reductase, an enzyme that is believed to be important
in the protection of proteins against the byproducts of aerobic metabolism.
Surprisingly, immunizing mice i.p. with syngeneic tumor cells (L1210) that
were constructed to express B7-1 and P815E did not induce resistance
against live P815, even though a strong anti-P815E CTL response was observed
with splenocytes from immunized animals.

REFERENCE COUNT: 44 THERE ARE 44 CITED REFERENCES AVAILABLE FOR THIS
RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L2 ANSWER 6 OF 9 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1989:406348 CAPLUS

DOCUMENT NUMBER: 111:6348

TITLE: The effects of dietary alterations of L-arginine,
L-methionine, and N-acetyl-L-methionine on the growth
of Morris hepatoma #3924A and tumor polyamine levels

AUTHOR(S): Diya, Cornelius Adeniyi

CORPORATE SOURCE: Howard Univ., Washington, DC, USA

SOURCE: (1987) 240 pp. Avail.: Univ. Microfilms Int., Order
No. DA8809013

DOCUMENT TYPE: From: Diss. Abstr. Int. B 1989, 49(7), 2573

LANGUAGE: Dissertation

AB Unavailable

L2 ANSWER 7 OF 9 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1979:570855 CAPLUS

DOCUMENT NUMBER: 91:170855

ORIGINAL REFERENCE NO.: 91:27549a, 27552a

TITLE: Pharmacokinetics of 99mTc-acetylmethionine in
tumor-bearing animals

AUTHOR(S): Khachirov, D. G.; Petrev, V. M.; Savin, Yu. I.;

Prikhod'ko, A. G.
CORPORATE SOURCE: Nauchno-Issled. Inst. Med. Radiol., Obninsk, USSR
SOURCE: Khimiko-Farmatsevticheskii Zhurnal (1979), 13(8), 33-5
CODEN: KHFZAN; ISSN: 0023-1134

DOCUMENT TYPE: Journal
LANGUAGE: Russian

AB Administration of ^{99m}Tc -labeled N-acetyl-DL-methionine (I) (100-50 μCi i.v.) to rats with exptl. induced muscle sarcomas resulted in the accumulation of ^{99m}Tc in different organs and tissues for 24 h. The highest accumulation occurred in the liver and kidneys. The ^{99m}Tc level in the neoplastic muscles was higher than in the healthy muscles; however, the difference was not statistically significant to justify the use of I for neoplasm scintigraphy. Similar results were obtained with $\text{Na}^{99m}\text{TcO}_4$, but the rate of accumulation of the label in the tissues was markedly lower than with I.

L2 ANSWER 8 OF 9 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1961:14595 CAPLUS

DOCUMENT NUMBER: 55:14595

ORIGINAL REFERENCE NO.: 55:29001,2901a

TITLE: Feeding of surface-active substances and effect on infections

AUTHOR(S): Borneff, J.

SOURCE: Archiv fuer Hygiene und Bakteriologie (1957), 141, 578-95

From: C.Z. 1958, 10135.

CODEN: AHBAAM; ISSN: 0003-9144

DOCUMENT TYPE: Journal

LANGUAGE: Unavailable

AB Hostapon (I) and Pril (II), surface-active materials, were given to guinea pigs and mice. I was given in high dose, II in normal dose corresponding to a possible human dose. No toxic effects were found at a level of 325 mg./kg./day, and no effect was found on enteral bacterial flora. Harmful effects were found only with concurrent streptococcal infection and treatment with I or II.

L2 ANSWER 9 OF 9 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1961:14594 CAPLUS

DOCUMENT NUMBER: 55:14594

ORIGINAL REFERENCE NO.: 55:2900h-i

TITLE: Antitumor effect of amino acid analogs

AUTHOR(S): Abe, Mihoko; Chibata, Ichiro; Hirokawa, Hideo; Kameda, Yukio; Mizuno, Denichi

SOURCE: Yakugaku Zasshi (1960), 80, 1309-11

CODEN: YKZAJ; ISSN: 0031-6903

DOCUMENT TYPE: Journal

LANGUAGE: Unavailable

AB Some methionine analogs which had a marked effect against the solid type Ehrlich ascites carcinoma in mice included L-RCH(NHCOCH₂Cl)CO₂H (R = MeSCH₂CH₂); RCH(NHCOCHCl₂)CO₂H; RCH(NHAc)CN; RCH(NHCOCH₂Cl)CN; RCH(NHCOCH₂NH₂.HCl)CN; EtSCH₂CH₂CH(NH₂.1/2H₂SO₄)CN; EtSCH₂CH₂CH(NHCOCH₂Cl)CN.

=> file caplus embase biosis medline

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SINCE FILE
ENTRY

TOTAL
SESSION

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=> s (seleno methionine or acetylmethionine) and (tumor or cancer or neoplasm)
L3 91 (SELENO METHIONINE OR ACETYL METHIONINE) AND (TUMOR OR CANCER OR
NEOPLASM)

=> dup rem
ENTER L# LIST OR (END):13
PROCESSING COMPLETED FOR L3
L4 81 DUP REM L3 (10 DUPLICATES REMOVED)

=> s 14 and py<=2003
L5 72 L4 AND PY<=2003

=> d 15 ibib abs 1-10

L5 ANSWER 1 OF 72 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 2004:704723 CAPLUS
DOCUMENT NUMBER: 141:349159
TITLE: Method for producing selenium-containing cow or goat
milk
INVENTOR(S): Jeng, Chang-yi
PATENT ASSIGNEE(S): Taiwan
SOURCE: Taiwan., 4 pp.
DOCUMENT TYPE: CODEN: TWXXA5
LANGUAGE: Patent
FAMILY ACC. NUM. COUNT: Chinese
PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|------------|------|----------|------------------|---|
| TW 565432 | B | 20031211 | TW 1999-88114467 | 19990824 <-
PRIORITY APPLN. INFO.: TW 1999-88114467 19990824 |

AB A method for producing Selenium-containing cow or goat milk comprises adding an organic selenium (seleno-methionine or yeast selenium) into the feedstuff of dairy cattle or goat in order to produce the selenium-containing cow or goat milk without affecting its milk output and quality, as well as the health status of the cow or goat. Such a selenium-containing cow or goat milk can increase the immunity, spirit, and anti-cancer ability of a human body.

L5 ANSWER 2 OF 72 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 1996:694251 CAPLUS
DOCUMENT NUMBER: 125:326402
TITLE: An immunoreactive conjugate, method for its preparation, antibodies to the conjugate and a pharmaceutical composition and diagnostic device containing them
INVENTOR(S): Maes, Roland

PATENT ASSIGNEE(S): Anda Biologicals S.A., Fr.
 SOURCE: Eur. Pat. Appl., 19 pp.
 CODEN: EPXXDW
 DOCUMENT TYPE: Patent
 LANGUAGE: French
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|------------------------|------|----------|-----------------|--------------|
| EP 736770 | A2 | 19961009 | EP 1996-870042 | 19960401 <-- |
| EP 736770 | A3 | 19970502 | | |
| R: BE, DE, FR, GB, IT | | | | |
| BE 1009230 | A6 | 19970107 | BE 1995-316 | 19950405 <-- |
| BE 1009917 | A6 | 19971104 | BE 1996-113 | 19960208 <-- |
| PRIORITY APPLN. INFO.: | | | BE 1995-316 | A 19950405 |
| | | | BE 1996-113 | A 19960208 |

AB An immunoreactive conjugate is disclosed which contains 1 or more haptens consisting of a sulfhydryl group and one of the following: amino acids, carbohydrates, amino carbohydrates, phosphatidylinositol, sphingosine, and their nitrosoyl, acyl, or acetyl derivs., the haptens being coupled to a protein with a mol. weight >8000 Kd and/or a solid support by a coupling agent capable of binding to the sulfhydryl group of the hapten. Thus, NO-cysteine and NO-N-acetyl-L-cysteine conjugates with albumin were prepared, and birds and mammals were vaccinated. IgG and IgM class antibodies specific for N-acetyl-L-cysteine were detected in the subjects. Addnl. analyses demonstrated that many HIV-pos. patients have IgG specific for acetyl-cysteine. Pharmaceutical compns. using these immunoreactive conjugates can be used in the prevention and/or treatment of autoimmunity, AIDS, cancer, tuberculosis and a variety of other diseases.

L5 ANSWER 3 OF 72 CAPLUS COPYRIGHT 2008 ACS on STN
 ACCESSION NUMBER: 1996:357099 CAPLUS
 DOCUMENT NUMBER: 125:26237
 TITLE: Antiviral drugs and immunomodulators containing chelate-forming agents
 INVENTOR(S): Bacanu, Serban Al; Ionescu, Iulian; Sarzea, Sorin; Tomas, Stefan Teodor
 PATENT ASSIGNEE(S): Medico Pharma Vertriebs GmbH, Germany; Sicomed S.A.
 SOURCE: PCT Int. Appl., 21 pp.
 CODEN: PIXXD2
 DOCUMENT TYPE: Patent
 LANGUAGE: German
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|------|----------|-----------------|--------------|
| WO 9606639 | A2 | 19960307 | WO 1995-EP3426 | 19950831 <-- |
| WO 9606639 | A3 | 19960725 | | |
| W: AM, AT, AU, BB, BG, BR, BY, CA, CH, CN, CZ, DE, DK, EE, ES, FI, GB, GE, HU, IS, JP, KE, KG, KP, KR, KZ, LK, LR, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, TJ, TM, TT, UA, UG, US, UZ, VN, BE, FR, GR, IE, IT, MC, NL, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG, SZ | | | | |
| RW: KE, MM, SD, SZ, UG, AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG | | | | |
| DE 4431175 | A1 | 19960411 | DE 1994-4431175 | 19940901 <-- |
| AU 9535194 | A | 19960322 | AU 1995-35194 | 19950831 <-- |
| PRIORITY APPLN. INFO.: | | | DE 1994-4431175 | A 19940901 |
| | | | WO 1995-EP3426 | W 19950831 |

AB Combinations of chelate-forming agents and essential amino acids or their derivs. which are optionally complexed with bivalent metal ions are useful as antiviral agents, immunomodulators for treatment of autoimmune diseases, anticancer agents, and drugs for treatment of neurodegenerative diseases. Thus, Rodilemid (CaNa₂EDTA/cysteine/Ca gluconate combination) (625 µg/mL) strongly inhibited HIV-1 in cultured MT-4 cells without inhibiting cell growth.

L5 ANSWER 4 OF 72 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 1989:406348 CAPLUS
DOCUMENT NUMBER: 111:6348
TITLE: The effects of dietary alterations of L-arginine, L-methionine, and N-acetyl-L-methionine on the growth of Morris hepatoma #3924A and tumor polyamine levels
AUTHOR(S): Diya, Cornelius Adeniyi
CORPORATE SOURCE: Howard Univ., Washington, DC, USA
SOURCE: (1987) 240 pp. Avail.: Univ. Microfilms Int., Order No. DA8809013
DOCUMENT TYPE: From: Diss. Abstr. Int. B 1989, 49(7), 2573
LANGUAGE: Dissertation
AB Unavailable English

L5 ANSWER 5 OF 72 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 1989:225835 CAPLUS
DOCUMENT NUMBER: 110:225835
TITLE: The in vitro growth response of primary human colorectal and gastric cancer cells to gastrin
AUTHOR(S): Watson, S. A.; Durrant, L. G.; Crosbie, J. D.; Morris, D. L.
CORPORATE SOURCE: Cancer Res. Campaign Lab., Univ. Nottingham, Nottingham, NG7 2RD, UK
SOURCE: International Journal of Cancer (1989), 43(4), 692-6
CODEN: IJCNAW; ISSN: 0020-7136
DOCUMENT TYPE: Journal
LANGUAGE: English
AB When a series of 31 colorectal and 13 gastric primary human tumors were screened for their growth response to human gastrin-17 in vitro, as assessed by ⁷⁵Se-seleno-methionine incorporation, 55% of colorectal and 69% of gastric tumors showed a trophic response to the hormone. The responses were achieved at physiol. gastrin concs. (post-prandial circulating gastrin levels) in 35% of colorectal and 55% of gastric tumors. Lymphocytes from tumor-associated lymph nodes showed no response to the hormone and normal mucosal cells (obtained from the resection margin of the surgical specimen) showed lower mean levels of ⁷⁵Se-seleno-methionine uptake (colorectal: 110%; gastric: 119%, expressed as a percentage of the control) when compared to tumors (colorectal: 151%; gastric: 147%). The small number of well differentiated and/or Dukes' stage A colorectal tumors examined were gastrin-responsive, but all the responsive gastric tumors were poorly differentiated. With respect to ploidy, 89% of diploid and 67% of aneuploid colorectal tumors responded trophically to gastrin. Patients with colorectal or gastric tumors may benefit from treatment with gastrin antagonists.

L5 ANSWER 6 OF 72 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 1988:542107 CAPLUS
DOCUMENT NUMBER: 109:142107

TITLE: Nitrogen-14 NMR studies of amine release from platinum anticancer drugs: models and human blood plasma

AUTHOR(S): Norman, Richard E.; Sadler, Peter J.

CORPORATE SOURCE: Dep. Chem., Birkbeck Coll., London, WC1E 6BT, UK

SOURCE: Inorganic Chemistry (1988), 27(20), 3583-7

CODEN: INOCAJ; ISSN: 0020-1669

DOCUMENT TYPE: Journal

LANGUAGE: English

AB The feasibility of using ^{14}N (^1H) NMR spectroscopy to follow reactions of Pt(II) antitumor drugs under biol. relevant conditions has been investigated. Amine release from cis-PtCl₂(NH₃)₂ upon reaction with both L-methionine and N-acetyl-L-methionine and from PtCl₂(1,2-diaminoethane) on reaction with L-methionine in aqueous solution can be readily detected.

Upon incubation (37° for 24 h) of cis-PtCl₂(NH₃)₂ with human blood plasma supplemented with L-methionine, at least one NH₃ ligand appears to be lost. Ammonia release is also detected upon addition of excess sodium diethyldithiocarbamate (an agent used clin. to reverse cisplatin toxicity) to plasma incubated with cis-PtCl₂(NH₃)₂ (37° for 2 h). Other ^{14}N peaks assigned in plasma spectra include those for amides, phosphatidylcholines, and N₂. Thus, ^{14}N NMR spectroscopy provides a useful probe for studying these drugs at millimolar concns. under conditions that approach physiol. relevance.

L5 ANSWER 7 OF 72 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1979:570855 CAPLUS

DOCUMENT NUMBER: 91:170855

ORIGINAL REFERENCE NO.: 91:27549a,27552a

TITLE: Pharmacokinetics of ^{99}Tc -acetylmethionine in tumor-bearing animals

AUTHOR(S): Khachirov, D. G.; Petriev, V. M.; Savin, Yu. I.; Prikhod'ko, A. G.

CORPORATE SOURCE: Nauchno-Issled. Inst. Med. Radiol., Obninsk, USSR

SOURCE: Khimiko-Farmatsevticheskii Zhurnal (1979), 13(8), 33-5

CODEN: KHFZAN; ISSN: 0023-1134

DOCUMENT TYPE: Journal

LANGUAGE: Russian

AB Administration of ^{99}Tc -labeled N-acetyl-DL-methionine (I) (100-50 μCi i.v.) to rats with exptl. induced muscle sarcomas resulted in the accumulation of ^{99}Tc in different organs and tissues for 24 h. The highest accumulation occurred in the liver and kidneys. The ^{99}Tc level in the neoplastic muscles was higher than in the healthy muscles; however, the difference was not statistically significant to justify the use of I for neoplasm scintigraphy. Similar results were obtained with $\text{Na}^{99}\text{TcO}_4$, but the rate of accumulation of the label in the tissues was markedly lower than with I.

L5 ANSWER 8 OF 72 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1972:72791 CAPLUS

DOCUMENT NUMBER: 76:72791

ORIGINAL REFERENCE NO.: 76:11729a,11732a

TITLE: Selenomethionine-75Se

PATENT ASSIGNEE(S): Nederlandse Organisatie voor Toegepast-Natuurwetenschappelijk Onderzoek ten behoeve van Nijverheid, Handel en Verkeer

SOURCE: Fr., 7 pp.

CODEN: FRXXAK

DOCUMENT TYPE: Patent

LANGUAGE: French

FAMILY ACC. NUM. COUNT: 2

PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|------------------------|------|----------|-----------------|--------------|
| FR 2052454 | A5 | 19710409 | FR 1970-19520 | 19700528 <-- |
| NL 6908609 | A | 19701208 | NL 1969-8609 | 19690606 <-- |
| NL 163210 | C | 19800815 | | |
| NO 133272 | B | 19751229 | NO 1970-2108 | 19700601 <-- |
| DE 2065906 | A1 | 19770120 | DE 1970-2065906 | 19700602 <-- |
| DE 2065906 | C2 | 19820429 | | |
| JP 49020184 | B | 19740523 | JP 1970-47882 | 19700603 <-- |
| IT 1004513 | B | 19760720 | IT 1970-68885 | 19700603 <-- |
| GB 1281293 | A | 19720712 | GB 1970-1281293 | 19700604 <-- |
| SE 373128 | B | 19750127 | SE 1970-7796 | 19700604 <-- |
| BE 751531 | A | 19701207 | BE 1970-751531 | 19700605 <-- |
| CH 546713 | A | 19740315 | CH 1970-8500 | 19700605 <-- |
| CH 549542 | A | 19740531 | CH 1973-13859 | 19700605 <-- |
| AT 303060 | B | 19721110 | AT 1970-5120 | 19700608 <-- |
| US 3898276 | A | 19750805 | US 1973-406583 | 19731015 <-- |
| PRIORITY APPLN. INFO.: | | | NL 1969-8609 | A 19690606 |
| | | | US 1970-41444 | A2 19700528 |

AB The title compound (I) is prepared by a 5-step synthesis. Thus, radioactive ⁷⁵Se is reacted with MeLi in THF at -5° under N and the MeSiLi decomposed with 50% H₂SO₄ to give MeSeH in 90% yield. MeSeH is treated with NaOMe in MeOH and then with bis-(chloroethyl)dioxopiperazine for 2 hr at 50°. Hydrolysis and acidification gives a 50% yield of product. L-Bis(bromoethyl)-dioxopiperazine may also be used to give L-selenomethionine-⁷⁵Se. The compds. are used in medicine to locate tumors.

L5 ANSWER 9 OF 72 CAPLUS COPYRIGHT 2008 ACS on STN
 ACCESSION NUMBER: 1971:436607 CAPLUS
 DOCUMENT NUMBER: 75:36607
 ORIGINAL REFERENCE NO.: 75:5801a,5804a
 TITLE: Data on the chemical structure and biological activity of hydrazides and hydrazones in a series of natural amino acids
 AUTHOR(S): Khvorova, N. M.; Pushkareva, Z. V.; Radina, L. B.; Volovel'skii, L. N.; Sof'ina, Z. P.; Aglitskaya, K. V.
 CORPORATE SOURCE: Ural. Politekh. Inst., Sverdlovsk, USSR
 SOURCE: Puti Sinteza i Izyskaniya Protivoopukholevykh Preparatov (1970), Volume Date 1968, No. 3, 113-20
 CODEN: PSIPA4; ISSN: 0370-1913
 DOCUMENT TYPE: Journal
 LANGUAGE: Russian
 AB RCH(NHAC)CONHN:CHR1, (I) ($R = \text{PhCH}_2$, $p\text{-HOC}_6\text{H}_4\text{CH}_2$, $\text{MeS}(\text{CH}_2)_2$, R1CH:NNHC(CH₂)₂, or indol-3-ylmethyl; $R1 = 3,4\text{-}(\text{HO})_2\text{C}_6\text{H}_3$ or 3,4-HO₂C(HO)C₆H₃) exist in solution and in the solid state as hydrazones and not as azo forms. I (same R; $R1 = \text{gluco-pentahydroxypentyl}$ or $\text{ribo-tetrahydroxybutyl}$) exist in the solid state in the pyranose or furanose form, but in solution an equilibrium exists with the acyclic form. Moderate antitumor properties were shown by the [p -[bis(β -chloroethyl)amino]benzylidene]hydrazide of N-acetyltryptophan and by the glucosylidenehydrazides of N-acetylmethionine and glutamic acid.

L5 ANSWER 10 OF 72 CAPLUS COPYRIGHT 2008 ACS on STN
 ACCESSION NUMBER: 1961:44317 CAPLUS
 DOCUMENT NUMBER: 55:44317
 ORIGINAL REFERENCE NO.: 55:8609c-e
 TITLE: Acylase activity in the liver of rats fed 4-dimethylaminoazobenzene
 AUTHOR(S): Kishi, Sanji; Haruno, Katsuhiko; Asano, Bunichi

CORPORATE SOURCE: Showa Med. School, Tokyo
SOURCE: Gann (1960), 51, 235-41
CODEN: GANNA2; ISSN: 0016-450X
DOCUMENT TYPE: Journal
LANGUAGE: Unavailable
AB Activity of acylase in the liver of rats fed 4-dimethylaminoazobenzene (DAB) was measured by using as substrates acetanilide (AA), diacetyl-L-tyrosine (DAT), and acetylmethionine (AM). Activity of acylase for AA in the slightly cirrhotic liver was higher than that in normal liver, and even a severe case showed nearly the normal value, whereas the activity in hepatoma was scarcely detected. When DAT was used for acylase test, pathol. changed livers, including hepatoma, showed higher activity than normal liver. Acylase activity on AM was slightly higher than normal in the pathol. but noncancerous livers. Hepatoma showed 60% of the normal value. The liver of DAB-treated rats in the 4th week of experiment showed higher activity than normal when tested with AA, DAT, or AM. With regenerating liver the activity diminished to about half that of the excised portion of the same liver.

=> d 15 ibib abs 11-72

L5 ANSWER 11 OF 72 EMBASE COPYRIGHT (c) 2008 Elsevier B.V. All rights reserved on STN
ACCESSION NUMBER: 2002323559 EMBASE
TITLE: L-methionine inhibits reaction of DNA with anticancer cis-diamminedichloroplatinum(II).
AUTHOR: Vrana O.; Brabec V.
CORPORATE SOURCE: V. Brabec, Institute of Biophysics, Acad. of Sci. of the Czech Republic, Kralovopolska 135, CZ-61265 Brno, Czech Republic. brabec@ibp.cz
SOURCE: Biochemistry, (Sep 2002) Vol. 41, No. 36, pp. 10994-10999.
Refs: 22
ISSN: 0006-2960 CODEN: BICHAW
COUNTRY: United States
DOCUMENT TYPE: Journal; Article
FILE SEGMENT: 016 Cancer
030 Clinical and Experimental Pharmacology
037 Drug Literature Index
LANGUAGE: English
SUMMARY LANGUAGE: English
ENTRY DATE: Entered STN: 10 Oct 2002
Last Updated on STN: 10 Oct 2002

AB Sufficient evidence has accumulated to identify DNA as the relevant pharmacological target of antitumor cisplatin [*cis*-diamminedichloroplatinum(II)]. This drug is administered intravenously so that before it reaches DNA in the nucleus of tumor cells it may interact with various compounds including sulfur-containing molecules such as L-methionine or the compounds containing these residues. L-Methionine increases the rate of reaction of cisplatin with monomeric guanosine 5'-monophosphate, and it was suggested on the basis of these results previously obtained by other authors that methionine residues could mediate the transfer of platinum onto DNA. We studied in the present work the reactions of the 1:1 complex formed between cisplatin and L-methionine or N-acetyl-L-methionine with synthetic, single- and double-stranded oligodeoxyribonucleotides and natural, high molecular mass DNA by using high-pressure liquid chromatography and flameless atomic absorption spectrophotometry. The results demonstrate that both L-methionine and N-acetyl-L-methionine decrease the rate of reaction of cisplatin with base residues in natural, high molecular mass DNA. Thus, the possibility that cisplatin bound to methionine residues serves as a drug reservoir available for platination of DNA in the nucleus of tumor cells

appears unlikely.

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ACCESSION NUMBER: 2002079739 EMBASE
TITLE: Cystathione pathway-dependent cytotoxicities of diethyl maleate and diamide in rat and human hepatoma-derived cell cultures.
AUTHOR: Dierickx P.J.; De Beer J.O.; Scheers E.M.
CORPORATE SOURCE: P.J. Dierickx, Lab. Biochemische Toxikologie, Instituut voor Volksgezondheid, Afdeling Toxikologie, Wytsmanstraat 14, 1050 Brussels, Belgium
SOURCE: ATLA Alternatives to Laboratory Animals, (2002) Vol. 30, No. 1, pp. 61-68.
Refs: 19
ISSN: 0261-1929 CODEN: AALADQ
COUNTRY: United Kingdom
DOCUMENT TYPE: Journal; Article
FILE SEGMENT: 005 General Pathology and Pathological Anatomy
052 Toxicology
LANGUAGE: English
SUMMARY LANGUAGE: English
ENTRY DATE: Entered STN: 14 Mar 2002
Last Updated on STN: 14 Mar 2002
AB Glutathione (GSH) plays a role in many toxicologically important metabolic processes. It was previously established that L-buthionine S,R-sulfoximine (BSO), a specific inhibitor of γ -glutamylcysteine synthetase, reduces the GSH content more efficiently in rat (Fa32) than in human (Hep G2) hepatoma-derived cells. We therefore investigated whether the cystathione inhibitor propargylglycine (PPG) could further decrease the BSO-induced GSH depletion in Hep G2 cells. The influence of the cystathione precursors N-acetylmethionine, methionine and homocysteine on the cytotoxicity of diethyl maleate (DEM) and diamide [1,1'-azobis(N,N-dimethylformamide)] was also investigated. PPG reduced the GSH content in both cell lines. A further GSH decrease in Hep G2 was obtained when using a BSO + PPG combination containing relatively high concentrations of PPG. BSO diminished the toxicity of PPG. Homocysteine was the most efficacious of the tested cystathione precursors in increasing the GSH content and reducing the cytotoxicity of DEM and diamide in Fa32 and Hep G2 cells.

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ACCESSION NUMBER: 2001435049 EMBASE
TITLE: Gene expression profiling of low selenium status in the mouse intestine: Transcriptional activation of genes linked to DNA damage, cell cycle control and oxidative stress.
AUTHOR: Rao L.; Puschner B.; Prolla T.A.
CORPORATE SOURCE: T.A. Prolla, Department of Genetics, University of Wisconsin-Madison, Madison, WI 53706, United States. taprolla@facstaff.wisc.edu
SOURCE: Journal of Nutrition, (2001) Vol. 131, No. 12, pp. 3175-3181.
Refs: 55
ISSN: 0022-3166 CODEN: JONUAI
COUNTRY: United States
DOCUMENT TYPE: Journal; Article
FILE SEGMENT: 029 Clinical and Experimental Biochemistry
LANGUAGE: English
SUMMARY LANGUAGE: English
ENTRY DATE: Entered STN: 3 Jan 2002
Last Updated on STN: 3 Jan 2002

AB The essential trace mineral selenium (Se) has been shown previously to inhibit intestinal, prostate, lung and liver tumor development and associated mortality in both experimental animals and humans. Although Se is likely to be one of the most powerful cancer chemopreventive agents in the human diet, its mechanism of action is unknown. To better understand the biological consequences of alterations in Se status, the gene expression profile associated with low Se status in the intestine of C57Bl/6J mice was analyzed. Mice were fed either a high fat (14%), torula yeast-based, Se-deficient diet (<0.01 mg/kg) or the same diet supplemented with a high level of dietary Se (1 mg/kg, as seleno-methionine) for 90 d. Use of high density oligonucleotide arrays representing 6347 genes revealed that low Se status results in a differential gene expression pattern indicative of activation of genes involved in DNA damage, oxidative stress and cell cycle control, and a decrease in the expression of genes involved in detoxification. These results suggest that suboptimal intake of a single trace mineral can have broad effects on gene expression patterns, providing a framework for understanding the multiple beneficial effects of Se in cancer chemoprevention and human health.

L5 ANSWER 14 OF 72 EMBASE COPYRIGHT (c) 2008 Elsevier B.V. All rights reserved on STN

ACCESSION NUMBER: 1998251087 EMBASE

TITLE: Growth inhibition of subcutaneously transplanted hepatomas without cachexia by alteration of the dietary arginine-methionine balance.

AUTHOR: Millis R.M.; Diya C.A.; Reynolds M.E.; Dehkordi O.; Bond Jr. V.

CORPORATE SOURCE: Dr. R.M. Millis, Dept. of Physiology and Biophysics, Howard Univ. College of Medicine, Washington, DC 20059, United States

SOURCE: Nutrition and Cancer, (1998) Vol. 31, No. 1, pp. 49-55.
Refs: 45

COUNTRY: ISSN: 0163-5581 CODEN: NUCADQ

DOCUMENT TYPE: United States

FILE SEGMENT: Journal; Article

016 Cancer

029 Clinical and Experimental Biochemistry

048 Gastroenterology

LANGUAGE: English

SUMMARY LANGUAGE: English

ENTRY DATE: Entered STN: 14 Aug 1998
Last Updated on STN: 14 Aug 1998

AB Previous studies have shown that alteration of the dietary arginine-methionine balance by use of synthetic L-amino acids inhibits tumor growth of a subcutaneously transplanted Morris hepatoma at the expense of maintaining body weight. However, L-methionine is susceptible to degradation and, therefore, may contribute to a deficiency state. The present studies were performed to determine whether growth of subcutaneous hepatoma transplants is inhibited, and body growth maintained, when rats are fed diets containing L-methionine in replacement of N-acetyl-L-methionine (NALM) for 28 days. Tumor-free and tumor-bearing rats fed a control diet, with amino acids replacing protein, had gains in body weight: 31.3 ± 1.0 and 19.1 ± 0.5 g (12% and 7%), respectively. Rats fed six experimental diets, with varying L-arginine-NALM balances, had body weight gains ranging from 18.4 ± 0.3 to 26.7 ± 0.9 g (7-10%). Tumor weight of control rats was $10.65 \pm 0.24\%$ of body weight. Diets supplemented with L-arginine in combination with normal and deficient NALM decreased tumor weights by 35% and 38%, respectively. It is concluded that dietary replacement of L-methionine with NALM and supplementation with L-arginine inhibits growth of a subcutaneously transplanted Morris

hepatoma in the absence of cachexia.

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ACCESSION NUMBER: 1990082535 EMBASE
TITLE: Thiol and thioether suppression of cis-platinum-induced nephrotoxicity in rats bearing the Walker 256 carcinosarcoma.
AUTHOR: Jones M.M.; Basinger M.A.
CORPORATE SOURCE: Dr. M.M. Jones, Department of Chemistry, Box 1583, Vanderbilt University, Nashville, TN 37235, United States
SOURCE: Anticancer Research, (1989) Vol. 9, No. 6, pp. 1937-1942.
ISSN: 0250-7005 CODEN: ANTRD4
COUNTRY: Greece
DOCUMENT TYPE: Journal; Article
FILE SEGMENT:
016 Cancer
028 Urology and Nephrology
030 Clinical and Experimental Pharmacology
037 Drug Literature Index
052 Toxicology
LANGUAGE: English
SUMMARY LANGUAGE: English
ENTRY DATE: Entered STN: 13 Dec 1991
Last Updated on STN: 13 Dec 1991

AB An examination of eighteen thiols and thio ethers revealed that the simultaneous administration of several of these with cis-platinum (CDDP) at 7.5 mg/kg (25 μ mol/kg) iv, as a single injection to rats bearing the Walker 256 carcinosarcoma led to significant reduction in the nephrotoxicity typically found with cis-platinum, and no apparent interference in its anti-neoplastic action towards this tumor. The thiols and thiol ethers were administered at twenty-fold molar excess to the CDDP and were combined with the CDDP immediately prior to administration. The most effective compounds in suppression nephrotoxicity were D-, and L-methionine, methyl and ethyl L-methioninate, and N-acetyl-D, L-methionine.

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ACCESSION NUMBER: 1976189679 EMBASE
TITLE: The reactivity and carcinogenicity of aflatoxin B(1) 2,3 dichloride, a model for the putative 2,3 oxide metabolite of aflatoxin B(1).
AUTHOR: Swenson D.H.; Miller J.A.; Miller E.C.
CORPORATE SOURCE: McArdle Lab. Cancer Res., Univ. Wisconsin Cent. Hlth Sci., Madison, Wis. 53706, United States
SOURCE: Cancer Research, (1975) Vol. 35, No. 12, pp. 3811-3823.
ISSN: 0008-5472 CODEN: CNREA8
DOCUMENT TYPE: Journal; Article
FILE SEGMENT:
016 Cancer
030 Clinical and Experimental Pharmacology
037 Drug Literature Index
005 General Pathology and Pathological Anatomy
LANGUAGE: English
AB Aflatoxin B(1) 2,3 dichloride (AFB(1) Cl(2)) was synthesized as a model for the probable ultimate carcinogen, aflatoxin B(1) 2,3 oxide. As expected for aflatoxin B(1) 2,3 oxide, AFB(1) Cl(2) has an electrophilic carbon 2; it decomposed in water (half life of 0.5 min in 10% dimethyl sulfoxide, pH 7.4) with the formation of 3 chloro 2,3 dihydro 2 hydroxyaflatoxin B(1) and 2,3 dihydro 2,3 dihydroxyaflatoxin B(1). AFB(1) Cl(2) formed covalent adducts with DNA and RNA with retention of one half of the chlorine; the major products apparently contained glycosidic bonds between carbon 2 of the aflatoxin residues and nitrogen or oxygen atoms in

the nucleic acids. Polyguanylic acid was the most reactive homopolymer toward AFB(1) Cl(2). AFB(1) Cl(2) was less reactive toward mononucleotides than toward polynucleotides. The major adducts formed on incubation of AFB(1) Cl(2) with protein contained little chlorine and could have resulted from alkylation of primary amino groups or from reactions with the hydrolysis products. Similarly, incubation of AFB(1) Cl(2) with amino acids apparently resulted in Schiff base formation between primary amino groups and the dialdehyde rearrangement forms of the hydrolysis products of AFB(1) Cl(2). AFB(1) Cl(2) was much more active than aflatoxin B(1) in inducing sarcomas at the s.c. injection site in rats, in the initiation of papillomas on the skin of mice, and in the induction of lung tumors in mice. AFB(1) Cl(2) was also highly mutagenic for *Salmonella typhimurium* TA 98 and TA 100. Aflatoxin B(1) and its 2,3 dihydro (aflatoxin B(2)), 2,3 dihydro 2 hydroxy (aflatoxin B(2)), 2,3 dihydro 2,3 dihydroxy, and 3 chloro 2,3 dihydro 2 hydroxy derivatives were inactive in the mutagenicity tests; and the latter four compounds were also inactive as initiators of papillomas of the skin in mice. The structures of the macromolecular adducts of AFB(1) Cl(2) formed *in vitro*, the carcinogenicity of this electrophile, and the lack of carcinogenicity of its hydrolysis products indicate that alkylation of nucleic acids is a critical reaction in tumor induction with this carcinogen and aflatoxin B(1).

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ACCESSION NUMBER: 1976041074 EMBASE
TITLE: Diagnosis of primary hepatocellular carcinoma with (99)Tc(m) acetylmethionine (Japanese).
AUTHOR: Kusakabe K.; Yamasaki T.; Ono Y.; et. al.
CORPORATE SOURCE: Dept. Radiol., Tokyo Women's Med. Coll., Tokyo, Japan
SOURCE: Kakugaku, (1975) Vol. 12, No. 1, pp. 43-47.
ISSN: 0022-7854 CODEN: KAIGBZ
DOCUMENT TYPE: Journal; Article
FILE SEGMENT:
016 Cancer
023 Nuclear Medicine
030 Clinical and Experimental Pharmacology
037 Drug Literature Index
LANGUAGE: Japanese
AB Since October, 1971 when the authors observed a high concentration of (75)Se selenomethionine in the tumor of a patient with hepatocellular carcinoma, they have been employing this radiopharmaceutical for differential diagnosis of conditions of the liver. However, one of the major problems is the long physical half time of the (75)Se. Methionine could be labeled with (99)(m)Tc by modification of Holan's method, with excellent yields and good liver tumor scanning results. The yield of labeling is in the range of 75 to 80%. In a patient with primary hepatocellular carcinoma, accumulation of the (99)(m)Tc methionine in the defect observed with radiocolloid scan was seen, and in a patient with metastatic liver cancer, accumulation was not seen. Scanning was started not later than 3 hours after injection, because the (99)(m)Tc label is released from the methionine and gradually disappears from the liver through the urinary system.

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ACCESSION NUMBER: 1975198210 EMBASE
TITLE: Seleno methionine 75 as a scanning agent for neuroblastoma.
AUTHOR: Covington E.E.; D'Angio G.J.; Helson andRomano L.R.W.
CORPORATE SOURCE: Nucl. Med. Serv., Dept. Med., Mem. Sloan Kettering Cancer Cent., New York, N.Y. 10021, United States

SOURCE: Clinical Bulletin, (1974) Vol. 4, No. 4, pp. 147-150.
CODEN: CLBUAU
DOCUMENT TYPE: Journal; Article
FILE SEGMENT:
016 Cancer
023 Nuclear Medicine
007 Pediatrics and Pediatric Surgery
008 Neurology and Neurosurgery
LANGUAGE: English
AB Neuroblastoma is a functioning tumor and patients with this tumor are known to excrete vanilmandelic acid and other degradation products of norepinephrine. It also accumulates and produces excess cystathione for which methionine is a precursor in the normal anabolic pathway. This was the rationale for testing [(75)Se] methionine as a possible scanning agent in patients with neuroblastoma. The results of a preliminary investigation in which 3 of 4 patients with neuroblastoma, all with known metastases of the skull, had positive scans correctly localizing the disease. The preliminary data seemed encouraging, and further investigation was undertaken. The results are reported here.

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ACCESSION NUMBER: 1975023620 EMBASE
TITLE: Inhibition of carcinogenic and toxic effects of polycyclic hydrocarbons by several sulfur containing compounds.
AUTHOR: Wattenberg L.W.
CORPORATE SOURCE: Dept. Pathol., Univ. Minnesota Med. Sch., Minneapolis, Minn. 55455, United States
SOURCE: Journal of the National Cancer Institute, (1974) Vol. 52, No. 5, pp. 1583-1587.
ISSN: 0027-8874 CODEN: JNCIAM
DOCUMENT TYPE: Journal; Article
FILE SEGMENT:
016 Cancer
037 Drug Literature Index
046 Environmental Health and Pollution Control
LANGUAGE: English
AB Disulfiram, dimethylidithiocarbamate, and benzyl thiocyanate, when added to the diet, inhibited 7,12 dimethylbenz(a)anthracene (DMBA) induced mammary tumor formation and adrenal necrosis in female Sprague Dawley rats. A single oral administration of disulfiram given 24 hours before the carcinogen similarly inhibited DMBA induced mammary tumor formation. In the mouse, disulfiram prevented the occurrence of tumors of the forestomach that resulted from benzo(a)pyrene in the diet but did not affect pulmonary adenoma formation in mice given this carcinogen by oral intubation.

L5 ANSWER 20 OF 72 BIOSIS COPYRIGHT (c) 2008 The Thomson Corporation on STN

ACCESSION NUMBER: 2001:170106 BIOSIS
DOCUMENT NUMBER: PREV200100170106
TITLE: Method and composition to reduce cancer incidence.
AUTHOR(S): Passwater, Richard A. [Inventor, Reprint author]; Olson, David M. [Inventor]
CORPORATE SOURCE: Ocean Pines, MD, USA
ASSIGNEE: Life Science Labs, Inc., Minneapolis, MN, USA
PATENT INFORMATION: US 6090414 20000718
SOURCE: Official Gazette of the United States Patent and Trademark Office Patents, (July 18, 2000) Vol. 1236, No. 3.
e-file.
CODEN: OGUPE7. ISSN: 0098-1133.
DOCUMENT TYPE: Patent

LANGUAGE: English
ENTRY DATE: Entered STN: 4 Apr 2001
Last Updated on STN: 18 Feb 2002
AB The five component composition consisting essentially of: (1) Water soluble antioxidant vitamin C or ascorbic acid, or any of its forms or derivatives, or mixtures thereof. (2) Oil soluble antioxidant vitamin E or Alpha-tocopherol, or any of its forms or derivatives, or mixtures thereof. (3) The element selenium, or a chemical (or composition) containing it, or mixtures thereof. The most preferred chemical containing selenium is dimethyl selenide and mixtures thereof. The words "dimethyl selenide" here and hereinafter mean dimethyl selenide and/or its oxidation products, including dimethyl selenoxide. (4) A sulfur amino acid, in any form, or a sulfur peptide, or a sulfur protein, or any of their derivatives, or mixtures thereof. The mixture of methionine and cysteine, which contains as impurities some seleno-methionine and some selenocysteine, is preferred,--the tripeptide glutathione containing cysteine is also preferred. (5) Another antioxidant, other than vitamin C and other than vitamin E, which is synthetic or natural and water soluble or oil soluble, or a mixture of such antioxidants, or a combination of such forms thereof. The mixtures of butylated hydroxyanisole and ethoxyquin is preferred.

L5 ANSWER 21 OF 72 BIOSIS COPYRIGHT (c) 2008 The Thomson Corporation on STN

ACCESSION NUMBER: 1996:511364 BIOSIS
DOCUMENT NUMBER: PREV19699233720
TITLE: NADPH-dependent oxidation of benzidine by rat liver.
AUTHOR(S): Lakshmi, Vijaya M.; Zenser, Nathan T.; Hsu, F. F.;
Mattamal, Michael B.; Zenser, Terry V. [Reprint author];
Davis, Bernard B.
CORPORATE SOURCE: VA Med. Cent., St. Louis, MO 63125-4199, USA
SOURCE: Carcinogenesis (Oxford), (1996) Vol. 17, No. 9,
pp. 1941-1947.
CODEN: CRNGDP. ISSN: 0143-3334.

DOCUMENT TYPE: Article
LANGUAGE: English
ENTRY DATE: Entered STN: 14 Nov 1996
Last Updated on STN: 10 Dec 1996

AB This study used liver microsomes from control and beta-naphthoflavone-treated rats to evaluate NADPH-dependent oxidation of benzidine. With microsomes from beta-naphthoflavone-treated rats, the rates of formation of aqueous soluble metabolite (HPLC analysis) and protein and DNA binding were 835 ± 81 , 14.5 ± 1.8 and 0.71 ± 0.14 pmol/mg/min respectively. beta-Naphthoflavone treatment elicited 12.3-, 1.8- and 14.2-fold increases in benzidine metabolism compared with controls as judged by HPLC and protein and DNA binding respectively. For microsomes from treated animals, K-m and V-max values were 47 ± 6 mu-M and 1.13 ± 0.16 nmol/mg protein/min respectively. All of the metabolic parameters were inhibited to varying degrees by glutathione (1 or 10 mM), N-acetylmethionine (10 mM) and ascorbic acid (10 mM). Following glutathione addition, at least two new metabolite peaks were observed, representing approx 6% of the total radioactivity recovered by HPLC. Neither metabolite was 3-(glutathion-S-yl)benzidine. Cytochrome P450 inhibitors (10 mu-M) specific for different members of cytochrome gene families 1-3 indicated that benzidine was metabolized by cytochrome P450 1A1/1A2. Ellipticine and alpha-naphthoflavone, specific 1A1/1A2 inhibitors, elicited 50% inhibition at -0.2 and 0.5 mu-M respectively. Electron impact and negative ion chemical ionization mass spectrometry identified the aqueous soluble metabolite as 3-hydroxybenzidine. The lability of 3-hydroxybenzidine observed at pH > 7.0 was prevented by ascorbic acid. Thus, cytochrome P450 1A1/1A2 NADPH-dependent metabolism of benzidine to 3-hydroxybenzidine was demonstrated.

L5 ANSWER 22 OF 72 BIOSIS COPYRIGHT (c) 2008 The Thomson Corporation on
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ACCESSION NUMBER: 1993:456546 BIOSIS
DOCUMENT NUMBER: PREV199396101446
TITLE: Bioactivation of N-hydroxy-2-acetylaminofluorenes by
N,O-acyltransferase: Substituent effects on covalent
binding to DNA.
AUTHOR(S): Boteju, Lakmal W.; Hanna, Patrick E. [Reprint author]
CORPORATE SOURCE: Dep. Med. Chem., Univ. Minnesota, Minneapolis, MN 55455,
USA
SOURCE: Carcinogenesis (Oxford), (1993) Vol. 14, No. 8,
pp. 1651-1657.
CODEN: CRNGDP. ISSN: 0143-3334.
DOCUMENT TYPE: Article
LANGUAGE: English
ENTRY DATE: Entered STN: 5 Oct 1993
Last Updated on STN: 30 Nov 1993

AB N-Acetoxyarylaminates are reactive metabolites that lead to arylamine adduct formation with biological macromolecules. A series of 7-substituted-N-hydroxy-2-acetylaminofluorenes were converted to reactive N-acetoxyarylaminates by enzymatic N,O-acyltransfer in the presence of DNA. The N-arylhdroxamic acid substrates that contained electronegative 7-substituents formed greater amounts of DNA adducts than either the unsubstituted compound (N-OH-AAF) or those analogs that contained electron-donating groups in the 7-position. Glutathione did not decrease the rates of DNA adduct formation, but other nucleophiles, such as potassium Oethylxanthate, thiourea and N-acetylmethionine, inhibited adduct formation by the 7-Br-substituted compound (7-Br-N-OH-AAF) and the unsubstituted parent compound (N-OH-AAF). Nucleophiles, reducing agents (e.g. ascorbic acid) and spin-trapping agents had minimal effect on DNA adduct formation by the bioactivated form of 7-acetyl-2-(N-hydroxyacetylamo)fluorene (7-Ac-N-OH-AAF). Triethylphosphite, an agent that reacts with aryl nitrenes, caused a concentration-dependent reduction in the amount of DNA adduct formed subsequent to bioactivation of 7-Ac-N-OH-AAF, but did not influence adduct formation when N-OH-AAF and 7-Br-N-OH-AAF were the substrates. The results indicate that a change in the reaction mechanism(s) responsible for DNA adduct formation occurred when the strongly electronegative acetyl group was incorporated into the 7-position of N-OH-AAF. It is proposed that a nitrene intermediate is involved in the formation of covalent adducts with DNA when 7-Ac-N-OH-AAF is activated by N,O-acyltransfer.

L5 ANSWER 23 OF 72 BIOSIS COPYRIGHT (c) 2008 The Thomson Corporation on
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ACCESSION NUMBER: 1988:311401 BIOSIS
DOCUMENT NUMBER: PREV198886028439; BA86:28439
TITLE: IRREVERSIBLE INHIBITION OF RAT HEPATIC TRANSACETYLASE
ACTIVITY BY ARYLHYDROXAMIC ACIDS.
AUTHOR(S): WICK M J [Reprint author]; JANTAN I B; HANNA P E
CORPORATE SOURCE: DEP PHARMACOL, UNIV MINN, MINNEAPOLIS, MINN 55455, USA
SOURCE: Biochemical Pharmacology, (1988) Vol. 37, No. 7,
pp. 1225-1232.
CODEN: BCPCA6. ISSN: 0006-2952.
DOCUMENT TYPE: Article
FILE SEGMENT: BA
LANGUAGE: ENGLISH
ENTRY DATE: Entered STN: 3 Jul 1988
Last Updated on STN: 3 Jul 1988

AB Both N-hydroxy-2-acetamidofluorene (N-OH-AAF) and the heterocyclic analogue, 2-(N-hydroxyacetamido)carbazole (N-OH-AAC), were shown to be mechanism-based irreversible inhibitors (suicide inhibitors) of partially

purified rat hepatic N-acetyltransferase (NAT) activity. Although N-OH-AAC exhibited an apparent first-order inactivation rate constant (k_i) that was 7-fold lower than that of N-OH-AAF, their relative k_i/KD values indicate that N-OH-AAC was the more potent and efficient inactivator of transacetylase activity. Inactivation of NAT activity by these N-arylhydroxamic acids appeared to involve contributions by electrophiles that react with the enzyme subsequent to release from the active site and by electrophiles that remain complexed with the active site. The irreversible nature of the enzyme inactivation was demonstrated by the failure to recover transacetylase activity upon either extensive dialysis or gel filtration of preparations that had been subjected to incubation with N-OH-AAF or N-OH-AAC. The use of the nucleophile N-acetylmethionine to trap the electrophilic reactants formed in the transacetylase-catalyzed bioactivation process resulted in a lower rate and extent of formation of methylthio adducts with N-OH-AAC than with N-OH-AAF. The results of this study indicate that N-OH-AAF and N-OH-AAC have potential for use as tools in the investigation of rat hepatic transacetylases.

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ACCESSION NUMBER: 1986:104871 BIOSIS

DOCUMENT NUMBER: PREV198681015287; BA81:15287

TITLE: SUBSTITUENT EFFECTS ON THE BIOACTIVATION OF 2-N HYDROXYACETAMIDOFLUORENES BY N ARYLHYDROXAMIC-ACID N O ACYLTRANSFERASE.

AUTHOR(S): ELFARRA A A [Reprint author]; HANNA P E

CORPORATE SOURCE: DEP MED CHEM, UNIV MINN, MINNEAPOLIS, MINN 55455, USA

SOURCE: Journal of Medicinal Chemistry, (1985) Vol. 28, No. 10, pp. 1453-1460.

CODEN: JMCMAR. ISSN: 0022-2623.

DOCUMENT TYPE: Article

FILE SEGMENT: BA

LANGUAGE: ENGLISH

ENTRY DATE: Entered STN: 25 Apr 1986

Last Updated on STN: 25 Apr 1986

AB A series of 7-substituted analogues of 2-(N-hydroxyacetamido)fluorene (1) was subjected to bioactivation by a partially purified preparation of hamster hepatic AHAT, and the rates of methylthio adduct formation resulting from the reaction of the activated intermediates with N-acetylmethionine were determined. Electronegative substituents enhanced the amount of adduct formed; this finding contrasted with the results of a previous study in which it was found that electron-donating substituents facilitated the mechanism-based inactivation of AHAT by analogues of 1. The structures of the adducts formed from reaction of the activated forms of several of the 7-substituted compounds with N-acetylmethionine and with 2'-deoxyguanosine were determined; the types of adducts formed were similar to those formed with electrophiles generated by the AHAT-catalyzed activation of 1. Electronegative substituents enhanced the amount of adducts formed in the reaction with 2'-deoxyguanosine as well as with N-acetylmethionine.

L5 ANSWER 25 OF 72 BIOSIS COPYRIGHT (c) 2008 The Thomson Corporation on STN

ACCESSION NUMBER: 1984:332752 BIOSIS

DOCUMENT NUMBER: PREV198478069232; BA78:69232

TITLE: EFFECT OF AN INORGANIC AND ORGANIC FORM OF DIETARY SELENIUM ON THE PROMOTIONAL STAGE OF MAMMARY CARCINOGENESIS IN THE RAT.

AUTHOR(S): THOMPSON H J [Reprint author]; MEEKER L D; KOKOSKA S

CORPORATE SOURCE: HUMAN NUTRITION CENT, COLOVOS ROAD, UNIV NEW HAMPSHIRE, DURHAM, NH 03824, USA

SOURCE: Cancer Research, (1984) Vol. 44, No. 7, pp. 2803-2806.
DOCUMENT TYPE: Article
FILE SEGMENT: BA
LANGUAGE: ENGLISH
AB The relative effectiveness of either sodium selenite or selenomethionine in the inhibition of mammary carcinogenesis was studied in virgin female Sprague-Dawley rats. In 1 experiment, rats were given 50 mg of 1-methyl-1-nitrosourea per kg of body wt s.c. at 50 days of age. Beginning 7 days post-1-methyl-1-nitrosourea, they were assigned to a basal diet containing 0.1 ppm of Se or basal diet supplemented to contain either 4, 5 or 6 ppm of Se as sodium selenite or 5 or 6 ppm of Se as selenomethionine. Selenium treatment was continued until termination of the study 135 days after 1-methyl-1-nitrosourea treatment. Sodium selenite at the 5 ppm level was the most effective chemopreventive agent. The highest level of selenomethionine (6 ppm) caused grossly apparent liver damage. No liver damage was noted in sodium selenite-treated rats. In a 2nd experiment, rats were given 5 mg of 7,12-dimethylbenz(a)anthracene at 50 days of age. Beginning 7 days after 7,12-dimethylbenz(a)anthracene treatment, rats were assigned randomly to the control group or to 1 of 2 Se treatment groups receiving either 3.4 ppm of Se as sodium selenite or 3.4 ppm as selenomethionine in their drinking water. Se supplementation was continued throughout the study until its termination at 111 days postcarcinogen. Sodium selenite significantly reduced cancer incidence and the average number of cancers per rat. Treatment with selenomethionine was less effective and caused severe liver damage. Although both sodium selenite and selenomethionine can inhibit some aspect of the postinitiation stage(s) of mammary carcinogenesis, Se provided as sodium selenite was the more effective and less toxic of the 2 chemicals. Increasing the dose of sodium selenite above 5 ppm did not enhance the inhibitory activity of Se.

L5 ANSWER 26 OF 72 BIOSIS COPYRIGHT (c) 2008 The Thomson Corporation on STN
ACCESSION NUMBER: 1984:179442 BIOSIS
DOCUMENT NUMBER: PREV198477012426; BA77:12426
TITLE: AMINO TERMINAL PROCESSING OF ACTIN IN MOUSE L CELLS IN-VIVO.
AUTHOR(S): RUBENSTEIN P A [Reprint author]; MARTIN D J
CORPORATE SOURCE: DEPARTMENT OF BIOCHEMISTRY, COLLEGE OF MEDICINE, UNIVERSITY OF IOWA, IOWA CITY, IOWA 52242, USA
SOURCE: Journal of Biological Chemistry, (1983) Vol. 258, No. 6, pp. 3961-3966.
DOCUMENT TYPE: Article
FILE SEGMENT: BA
LANGUAGE: ENGLISH
AB When Dictyostelium discoideum actin is synthesized in vitro, it is made as a 43,000-dalton polypeptide with an NH₂-terminal N-acetylmethionine. The acetyl methionine is then cleaved post-translationally, and the new NH₂-terminal aspartic acid is acetylated to give the mature form of actin. Inhibition of methionine acetylation prevents methionine cleavage. The results of experiments designed to discover whether this novel actin processing pathway is peculiar to the rabbit reticulocyte lysate system or whether it is utilized by mammalian cells in vivo as well are described. In mouse [neoplastic liver fibroblast] L-929 cells, actin is made as a 43,000-dalton protein with an NH₂-terminal N-acetylmethionine residue. Experiments using TLC and digestion of the acylmethionine residue with hog kidney acylase I demonstrate that the acyl group is an acetyl residue. Pulse-chase experiments show that over the course of 1 h, this precursor is

transformed first to an actin with a free NH₂-terminal aspartic acid and is subsequently converted to mature L-cell actin with an acetylaspartic acid NH₂ terminus. The half-life of the initial actin precursor in the cell appears to be .apprx. 12-15 min. The studies demonstrate the existence of this novel actin processing pathway *in vivo* and suggest that it is used for those actins where, in the gene, the initiator methionine codon directly precedes the codon for aspartic or glutamic acids, the residues normally found at the actin NH₂ terminus.

L5 ANSWER 27 OF 72 BIOSIS COPYRIGHT (c) 2008 The Thomson Corporation on STN

ACCESSION NUMBER: 1983:300983 BIOSIS
DOCUMENT NUMBER: PREV198376058475; BA76:58475
TITLE: A MODIFICATION OF THE SELENIUM-75 LABELED SELENO METHIONINE ASSAY FOR THE DETECTION OF COMPLEMENT DEPENDENT ANTIBODY IN HUMAN TUMOR SYSTEMS.
AUTHOR(S): AVIS I L [Reprint author]; AVIS F P
CORPORATE SOURCE: DEP SURGERY, UNIV WEST VIRGINIA, MORGANTOWN, W VA 26506, USA
SOURCE: Journal of Surgical Oncology, (1983) Vol. 22, No. 4, pp. 231-235.
CODEN: JSONAU. ISSN: 0022-4790.

DOCUMENT TYPE: Article
FILE SEGMENT: BA
LANGUAGE: ENGLISH

AB A modification of Brook's prelabeling (75Se) selenomethionine assay was developed and evaluated for detection of complement-dependent antibody (CDA) in a human tumor system. CDA was indeed detected in some breast cancer patients' sera. To determine whether the assay was reliable and reproducible, xenoantibodies were raised in rabbits by immunization with a human breast cancer line, Sk-Br-3, and tested against that line and 5 other unrelated human cancer lines. Multiple tests were performed on separate days. It can be concluded from the data that the assay is reliable and reproducible. The assay has wide application in investigating the biologic role of complement-dependent antibody activity in human and experimental animal tumor systems.

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ACCESSION NUMBER: 1983:239369 BIOSIS
DOCUMENT NUMBER: PREV198375089369; BA75:89369
TITLE: EVALUATION OF TECHNETIUM-99M LABELED AMINO-ACIDS AS RADIO PHARMACEUTICALS 4. SULFUR SUBSTITUTED CYSTEINES AND NITROGEN SUBSTITUTED IMINO DI ACETIC ACIDS.
AUTHOR(S): KARUBE Y [Reprint author]; MAEDA T; OHYA M; SUGATA S; KONO A; MATUSHIMA Y
CORPORATE SOURCE: KYUSHU CANCER CENTER RESEARCH INSTITUTE, NOTAME, MINAMI-KU, FUKUOKA 815, JAPAN
SOURCE: Journal of Radiation Research, (1982) Vol. 23, No. 2, pp. 234-241.
CODEN: JRARAX. ISSN: 0449-3060.

DOCUMENT TYPE: Article
FILE SEGMENT: BA
LANGUAGE: ENGLISH

AB 99mTc-labeled ligands [16] were evaluated as scintigraphic agents [for cancer diagnosis]. The ligands studied were cysteine, glutathione, their S-substituted derivatives, lysine-N_ε,N_ε-diacetic acid, glycylglycine-N,N-diacetic acid, glycylglycylglycine-N,N-diacetic acid, taurine-N,N-diacetic acid, hydrazine-N,N-diacetic acid, ethylenediamine-N,N-diacetic acid and propylene-1,3-diamine-N₁,N₁-diacetic acid. The ligands were labeled with

99mTc by the SnCl₂ method, with > 95% yield. The in vivo behavior of the 99mTc-labeled ligands was studied in golden hamsters and dogs. The organ distribution in golden hamsters indicated clearance both by hepatobiliary and renal systems. The pancreas/blood ratios were much lower in the 99mTc-ligands than in 75Se-selenomethionine. Scintigraphic studies in dogs showed that the liver and kidneys were well visualized, but the accumulation by the pancreas was not sufficient for clear visualization.

L5 ANSWER 29 OF 72 BIOSIS COPYRIGHT (c) 2008 The Thomson Corporation on
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ACCESSION NUMBER: 1983:211350 BIOSIS
DOCUMENT NUMBER: PREV198375061350; BA75:61350
TITLE: ARYL HYDROXAMIC-ACID BIO ACTIVATION VIA ACYL GROUP TRANSFER
STRUCTURAL REQUIREMENTS FOR TRANS ACYLATING AND
ELECTROPHILE GENERATING ACTIVITY OF N-2 FLUORENYL
HYDROXAMIC ACIDS AND RELATED COMPOUNDS.
AUTHOR(S): YEH H-M [Reprint author]; HANNA P E
CORPORATE SOURCE: DEP PHARMACOL, UNIV MINNESOTA, MINNEAPOLIS, MINN 55455, USA
SOURCE: Journal of Medicinal Chemistry, (1982) Vol. 25,
No. 7, pp. 842-846.
CODEN: JMCMAR. ISSN: 0022-2623.

DOCUMENT TYPE: Article
FILE SEGMENT: BA
LANGUAGE: ENGLISH

AB The synthesis of a series of 12 N-(2-fluorenyl)hydroxamic acids, N-(2-fluorenyl)-N-hydroxyureas and N-(2-fluorenyl)-N-hydroxycarbamates is reported. The compounds were evaluated for their ability to serve as substrates for a partially purified hamster hepatic arylhydroxamic acid N,O-acyltransferase preparation. Transacylating activity was measured spectrophotometrically with 4-aminoazobenzene as the acyl group acceptor, and electrophile-generating activity, which is thought to be responsible for the toxic and carcinogenic activity of this compound, was quantified by the N-acetylmethionine trapping assay. Only the N-acetyl, N-propionyl and N-methoxyacetyl derivatives exhibited relatively high levels of activity as measured by either of the assay methods. These results are generally consistent with previously reported conclusions regarding the steric and electronic characteristics of acyl groups that are required for activation by this enzyme system. N,O-Acyltransferase inactivation by N-hydroxy-2-acetamidofluorene depressed the bioactivation of the N-acetyl compound to a greater extent than the N-propionyl or N-methoxyacetyl derivative.

L5 ANSWER 30 OF 72 BIOSIS COPYRIGHT (c) 2008 The Thomson Corporation on
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ACCESSION NUMBER: 1982:106409 BIOSIS
DOCUMENT NUMBER: PREV198223036401; BR23:36401
TITLE: AMINO TERMINAL ACTIN PROCESSING IN-VIVO GOES THROUGH A
43000 MOLECULAR WEIGHT POLY PEPTIDE INTERMEDIATE WITH AN
AMINO TERMINAL ACETYL METHIONINE.
AUTHOR(S): RUBENSTEIN P A [Reprint author]; RUPPERT D
CORPORATE SOURCE: UNIV IOWA, IOWA CITY, IOWA 52242, USA
SOURCE: Federation Proceedings, (1982) Vol. 41, No. 4,
pp. ABSTRACT 6724.
Meeting Info.: 66TH ANNUAL MEETING OF THE FEDERATION OF
AMERICAN SOCIETIES FOR EXPERIMENTAL BIOLOGY, NEW ORLEANS,
LA., USA, APRIL 15-23, 1982. FED PROC.
CODEN: FEPRFA7. ISSN: 0014-9446.

DOCUMENT TYPE: Conference; (Meeting)
FILE SEGMENT: BR
LANGUAGE: ENGLISH

L5 ANSWER 31 OF 72 BIOSIS COPYRIGHT (c) 2008 The Thomson Corporation on

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ACCESSION NUMBER: 1982:49438 BIOSIS
DOCUMENT NUMBER: PREV198222049438; BR22:49438
TITLE: SCINTIGRAM OF THE TUMOR PRODUCING PANCREATIC
ISLETS HORMONE AND DIGESTIVE TRACTS HORMONE BY SELENIUM-75
LABELED SLENO METHIONINE.
AUTHOR(S): IWASAKI N [Reprint author]; ICHIKAWA K; WATARI T; TAJIMA Y;
SATOH N
CORPORATE SOURCE: DOKKYO UNIV SCH MED, TOCHIGI
SOURCE: Kaku Igaku, (1981) Vol. 18, No. 5, pp. 742.
Meeting Info.: 20TH ANNUAL MEETING OF THE JAPANESE SOCIETY
OF NUCLEAR MEDICINE, MAEBASHI, GUMMA, JAPAN, NOV. 13-15,
1980. JPN J NUCL MED.
CODEN: KAIGBZ. ISSN: 0022-7854.
DOCUMENT TYPE: Conference; (Meeting)
FILE SEGMENT: BR
LANGUAGE: ENGLISH

L5 ANSWER 32 OF 72 BIOSIS COPYRIGHT (c) 2008 The Thomson Corporation on
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ACCESSION NUMBER: 1981:247859 BIOSIS
DOCUMENT NUMBER: PREV198172032843; BA72:32843
TITLE: INHIBITORY EFFECTS OF SELENIUM ON THE GROWTH OF L-1210
LEUKEMIC CELLS.
AUTHOR(S): MILNER J A [Reprint author]; HSU C Y
CORPORATE SOURCE: DEP FOOD SCI., UNIV ILLINOIS, URBANA 61801, USA
SOURCE: Cancer Research, (1981) Vol. 41, No. 5, pp.
1652-1656.
CODEN: CNREA8. ISSN: 0008-5472.

DOCUMENT TYPE: Article
FILE SEGMENT: BA
LANGUAGE: ENGLISH

AB Se inhibited [mouse leukemia] L1210 cells in vitro and in vivo. The death
of L1210 cells in vitro as indicated by trypan blue exclusion was
dependent upon the form and concentration of Se tested. Incubation of
L1210 cells in buffer containing Se at 1 µg/ml for 1 h prior to
inoculation into mice significantly retarded the ability of the cells to
propagate in vivo. Sodium selenite injected i.p. increased the longevity
of mice inoculated with L1210 cells. Administration of 40 µg selenium
as sodium selenite daily for 7 days resulted in a 65% increase in
longevity of mice inoculated with 105 L1210 cells. Injections of sodium
selenite at doses of 40 µg/day or less for 7 days did not significantly
alter growth, liver weight or red and white blood cell counts. The
efficacy of Se therapy was dependent upon the total number of
tumor cells given in the initial inoculum. Se administration as
sodium selenite was more effective in increasing the longevity of
L1210-inoculated mice than was treatment with sodium selenite,
selenocystine or selenomethionine. Sodium selenite treatment at 20, 30 or
40 µg/day in mice inoculated with 102 cells resulted in 50, 80 and 90%
cures, respectively. Supplementation of the drinking water with 3 ppm Se
as sodium selenite increased the longevity of L1210-inoculated mice by
approximately 30%. Combined therapy with Se (30 µg/day) and
methotrexate resulted in a significantly longer life span of L1210-treated
mice than resulted from either compound administered separately.

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ACCESSION NUMBER: 1980:273429 BIOSIS
DOCUMENT NUMBER: PREV198070065925; BA70:65925
TITLE: SELENO METHIONINE LIVER SCANNING IN THE
DIAGNOSIS OF HEPATOMA.
AUTHOR(S): COAKLEY A J [Reprint author]; WRAIGHT E P

CORPORATE SOURCE: DEP NUCL MED, ADDENBROOKE'S HOSP, CAMBRIDGE CB2 2QQ, ENGL,
UK
SOURCE: British Journal of Radiology, (1980) Vol. 53, No.
630, pp. 538-543.
CODEN: BJRAAP. ISSN: 0007-1285.

DOCUMENT TYPE: Article
FILE SEGMENT: BA
LANGUAGE: ENGLISH

AB Liver subtraction scans using 99Tcm sulphur colloid and 75Se-selenomethionine were conducted in 58 patients with suspected hepatoma. Of the 18 patients with hepatoma proven by histology, 16 showed selective concentration of selenomethionine in the tumor, giving a true positive rate of 89%. Of the 40 patients did not have hepatoma, 32 scans showed no evidence of selective concentration of selenomethionine, giving a true negative rate of 80%. The false positive rate was 8% in non-cirrhotic patients with focal disease, but 55% in patients with cirrhosis. Combined scanning with this technique apparently is, useful in non-cirrhotic patients in distinguishing hepatoma from other causes of focal disease; the technique is not useful and frequently misleading in patients with cirrhosis.

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ACCESSION NUMBER: 1980:273352 BIOSIS
DOCUMENT NUMBER: PREV198070065848; BA70:65848
TITLE: INDUCTION OF DNA REPAIR BY SOME SELENIUM COMPOUNDS.
AUTHOR(S): RUSSELL G R [Reprint author]; NADER C J; PARTICK E J
CORPORATE SOURCE: CSIRO DIV HUM NUTR, KINTORE AVE, ADELAIDE, S AUST 5000,
AUST

SOURCE: Cancer Letters, (1980) Vol. 10, No. 1, pp. 75-82.
CODEN: CALEDQ. ISSN: 0304-3835.

DOCUMENT TYPE: Article
FILE SEGMENT: BA
LANGUAGE: ENGLISH

AB Selenium compounds induced DNA repair synthesis as a measure of DNA damage in the isolated rat liver cell system and by Ames' Salmonella assay. In liver cells, DNA repair measured by uptake of [³H]thymidine greater with sodium selenite and selenate than with selenomethionine. In the bacterial culture system, selenomethionine inhibited the repair-deficient variant more than the selenite and selenate. These *in vitro* test systems were used to indicate that Se has a DNA-damaging potential and thus may be carcinogenic.

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ACCESSION NUMBER: 1980:149495 BIOSIS
DOCUMENT NUMBER: PREV198069024491; BA69:24491
TITLE: ACCUMULATION OF RADIO IODINATED L METHYL TYROSINE IN PANCREAS OF MICE CONCISE COMMUNICATION.
AUTHOR(S): TISLJAR U [Reprint author]; KLOSTER G; RITZL F; STOECKLIN G
CORPORATE SOURCE: INST CHEM, KERNFORSCH JULICH GMBH, D-5170 JULICH, W GER
SOURCE: Journal of Nuclear Medicine, (1979) Vol. 20, No.
9, pp. 973-976.
CODEN: JNMEAQ. ISSN: 0161-5505.

DOCUMENT TYPE: Article
FILE SEGMENT: BA
LANGUAGE: ENGLISH

AB [An improved imaging agent for diagnosis of pancreatic cancer is needed]. L-3-iodo- α -methyltyrosine, labeled ¹³¹I or ¹²³I, has a high pancreatic specificity in mice. A pancreas-to-liver ratio of 8.6 ± 2.7 is observed during the 1st h after i.v. injection. Accumulation is also prominent in the kidneys, but excretion of the radioagent is

rapid, 50% of the activity being eliminated during 90 min. Compared with L-[75Se]selenomethionine, the compound currently used for pancreatic imaging, L-3-[123I] or [131I]iodo- α -methyltyrosine has a higher pancreas-to-liver ratio, a shorter physical half-life and biological half-time and better decay characteristics.

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ACCESSION NUMBER: 1980:36977 BIOSIS
DOCUMENT NUMBER: PREV198018036977; BR18:36977
TITLE: HOST CELLS INFILTRATING TUMORS IN-VIVO AND
IN-VITRO REACTIVITY.
AUTHOR(S): FLANNERY G R [Reprint author]; ROBINS R A; BALDWIN R W
CORPORATE SOURCE: CANCER RES CAMPAIGN LAB, UNIV NOTTINGHAM, NOTTINGHAM, ENGL,
UK
SOURCE: British Journal of Cancer, (1979) Vol. 40, No. 2,
pp. 308.
CODEN: BJCAAI. ISSN: 0007-0920.
DOCUMENT TYPE: Article
FILE SEGMENT: BR
LANGUAGE: ENGLISH

L5 ANSWER 37 OF 72 BIOSIS COPYRIGHT (c) 2008 The Thomson Corporation on
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ACCESSION NUMBER: 1979:136851 BIOSIS
DOCUMENT NUMBER: PREV197967016851; BA67:16851
TITLE: SELENIUM-75 SELENO METHIONINE
SCINTIGRAPHY IN MEDIASTINAL DISEASES.
AUTHOR(S): MASAOKA A [Reprint author]; KYO S
CORPORATE SOURCE: FIRST DEP SURG, OSAKA UNIV MED SCH, FUKUSHIMAKU, OSAKA, JPN
SOURCE: Journal of Thoracic and Cardiovascular Surgery, (1978) Vol. 75, No. 3, pp. 419-424.
CODEN: JTCSAQ. ISSN: 0022-5223.
DOCUMENT TYPE: Article
FILE SEGMENT: BA
LANGUAGE: ENGLISH
AB Chest scanning with 75Se-selenomethionine was performed in 59 cases of mediastinal diseases. All cases of vascular diseases, cystic tumors and benign neurogenic tumor were negatively scanned. Parenchymatous teratoma, thymoma, malignant lymphoma, Castleman's tumor, epithelial tumors, tuberculous lymphadenitis and sarcoidosis showed high positive rates. In myasthenic thymus without thymoma, 2 of 15 cases were positive. The scan images of the resected specimens and preoperative chest scannings coincided.

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ACCESSION NUMBER: 1979:122931 BIOSIS
DOCUMENT NUMBER: PREV197967002931; BA67:2931
TITLE: STUDIES ON THE MICRO CYTO TOXICITY TEST PART 3 COMPARISON
OF SELENIUM-75 SELENO METHIONINE WITH
TRITIATED PROLINE CHROMIUM-51 LABELED SODIUM CHROMATE AND
IODINE-125 IODODOXY URIDINE FOR PRE LABELING TARGET CELLS
IN LONG-TERM CYTO TOXICITY TESTS.
AUTHOR(S): BROOKS C G [Reprint author]
CORPORATE SOURCE: CANCER RES CAMPAIGN LAB, UNIV NOTTINGHAM, UNIVERSITY PARK,
NOTTINGHAM, ENGL, UK
SOURCE: Journal of Immunological Methods, (1978) Vol. 22,
No. 1-2, pp. 23-36.
CODEN: JIMMBG. ISSN: 0022-1759.
DOCUMENT TYPE: Article
FILE SEGMENT: BA

- LANGUAGE: ENGLISH
- AB Four intracellular radioisotope labels, [³H]proline, Na²⁵¹CrO₄, [⁷⁵Se]selenomethionine and [¹²⁵I]iododeoxyuridine, were evaluated for use in a pre-labeling long-term microcytotoxicity assay for cell-mediated immunity. Adherent rat tumor cells established in tissue culture were used as targets, and the basic variables studied were labeling efficiency, toxicity and spontaneous release rates. [¹²⁵I]Iododeoxyuridine was unsuitable on account of its high toxicity and correspondingly high spontaneous release rate, and Na²⁵¹CrO₄ for its toxicity and low labeling efficiency. Of the 2 other radiolabels, [⁷⁵Se]selenomethionine had the advantage over [³H]proline of higher labeling efficiency (especially in Ham's F10 medium), lower toxicity and being a γ -emitter. Released ⁷⁵Se was non-reutilizable and its retention by target cells provided an accurate measure of cell survival in an alloimmune system. Methods of calculating the results of pre-labeling cytotoxicity tests based on the total radioactivity in target cells at the beginning of the assay were invalid.
- L5 ANSWER 39 OF 72 BIOSIS COPYRIGHT (c) 2008 The Thomson Corporation on STN
- ACCESSION NUMBER: 1978:228352 BIOSIS
- DOCUMENT NUMBER: PREV197866040849; BA66:40849
- TITLE: THE USE OF MULTIPLE RADIO NUCLIDE SCANNING IN THE DIFFERENTIATION OF UPPER ABDOMINAL LESIONS.
- AUTHOR(S): ANDREWS J T [Reprint author]
- CORPORATE SOURCE: R MEJB HOSP, MELBOURNE, VICTORIA, AUST
- SOURCE: Australasian Radiology, (1977) Vol. 21, No. 2, pp. 150-155.
- CODEN: AURDAW. ISSN: 0004-8461.
- DOCUMENT TYPE: Article
- FILE SEGMENT: BA
- LANGUAGE: ENGLISH
- AB An attempt was made to evaluate the usefulness of an extension of the RES scan by a triple or quadruple radionuclide study in the diagnosis of disease processes of the upper abdomen, particularly in the investigation of abdominal masses in patients. The RES scan may be combined with a tumor seeking radionuclide such as ⁷⁵Se selenomethionine or ⁶⁷Ga citrate. A combination of 3 or more radionuclides increase the overall diagnostic accuracy of the technique.
- L5 ANSWER 40 OF 72 BIOSIS COPYRIGHT (c) 2008 The Thomson Corporation on STN
- ACCESSION NUMBER: 1978:203264 BIOSIS
- DOCUMENT NUMBER: PREV197866015761; BA66:15761
- TITLE: THE VALUE OF DIAGNOSTIC AIDS IN DETECTING PANCREAS CANCER.
- AUTHOR(S): FITZGERALD P J [Reprint author]; FORTNER J G; WATSON R C; SCHWARTZ M K; SHERLOCK P; BENUA R S; CUBILLA A L; SCHOTTENFELD D; MILLER D; ET AL
- CORPORATE SOURCE: MEML SLOAN-KETTERING CANCER CENT, 1275 YORK AVE, NEW YORK, NY 10021, USA
- SOURCE: Cancer, (1978) Vol. 41, No. 3, pp. 868-879.
- CODEN: CANCAR. ISSN: 0008-543X.
- DOCUMENT TYPE: Article
- FILE SEGMENT: BA
- LANGUAGE: ENGLISH
- AB By contract with the National Cancer Institute, the accuracy of diagnostic techniques was assessed in 184 patients suspected of having pancreas cancer. Of 138 patients operated on, 89 had pancreas duct cancer, 30 had cancer of a different site of origin in the head of the pancreas region and in 19 there was no evidence of cancer at operation. Of the 46 patients who were not

operated on, 13 had cancer and 33 patients were discharged as free of cancer. The majority of patients presented with signs and symptoms of biliary obstruction. Computerized transaxial tomography (CTT) gave a correct diagnosis in 31 of 33 patients (94%) with proven cancer, there were 2 patients with a false-negative report and a false-positive diagnosis occurred in 8 of 20 patients (40%) without cancer. Celiac angiography (CA) gave a correct diagnosis in 78 of 94 patients (83%) with cancer, a false-negative in 17% and a false-positive in 32%. ⁷⁵Selenomethionine scan correctly diagnosed 27 of 36 patients (75%) with cancer, gave a false-negative in 25% and a false-positive in 31%. Ultrasonography gave a correct diagnosis in 18 of 27 patients with cancer (67%), a false-negative in 33% and a false-positive in 28%. Endoscopic retrograde cholangiopancreatography diagnosed correctly 8 of 11 cases (73%) of cancer; there were false-negative diagnoses of 3 cases (27%) and false-positives in 3 of 14 patients (21%). Duodenal aspiration techniques gave a low percentage of correct diagnoses. Chronic pancreatitis most commonly gave rise to a false-positive diagnosis. Serum alkaline phosphatase was elevated in 82% of patients and gave 18% false-negatives and 33% false-positives. Carcinoembryonic antigen (CEA) was elevated (> 2.5 ng/ml) in most of the pancreas cancer patients but also in patients with other cancers and non-cancerous disease. CTT, CA, alkaline phosphatase, ⁷⁵Se-methionine and ultrasonography, in descending order, gave the highest percentage of correct diagnoses, but false-positive and false-negative diagnoses prevented any single test from being conclusive.

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ACCESSION NUMBER: 1978:143820 BIOSIS
DOCUMENT NUMBER: PREV197865030820; BA65:30820
TITLE: SERUM THROMBOPOIETIC ACTIVITY FOLLOWING ADMINISTRATION OF VINBLASTINE.
AUTHOR(S): KLENER P [Reprint author]; MARCIBAL O; DONNER L; KORNALIK F
CORPORATE SOURCE: DIV HAEMATOL, 2ND DEP MED, CHARLES UNIV HOSP, U NEMOCNICE
2, 128 08 PRAHA 2, CZECH
SOURCE: Scandinavian Journal of Haematology, (1977) Vol.
19, No. 3, pp. 287-292.
CODEN: SJHAAQ. ISSN: 0036-553X.
DOCUMENT TYPE: Article
FILE SEGMENT: BA
LANGUAGE: ENGLISH

AB A possible role of humoral factors in the pathogenesis of vinblastine-induced thrombocytosis was examined. The thrombopoietic activity in serum of experimental animals was tested for its ability to stimulate the incorporation of ⁷⁵-Se-selenomethionine into platelets of thrombocythemic mice. The administration of low doses (0.1-0.5 mg/kg body wt) of vinblastine to rabbits caused a significant increase in serum thrombopoietic activity. Higher doses of vinblastine (1-5 mg/kg body wt) also increased the serum thrombopoietic activity but this increase was preceded by a transient drop in the platelet count of peripheral blood. This thrombocytopenia could be a stimulus for an increase in thrombopoietic activity, through a compensatory feedback mechanism. The vinblastine-induced increase in thrombopoietic activity was abolished by bilateral nephrectomy but not by bilateral ureteral ligation. Kidney tissue may be a major source of the serum thrombopoietic factors.

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ACCESSION NUMBER: 1978:129059 BIOSIS
DOCUMENT NUMBER: PREV197865016059; BA65:16059
TITLE: THE INTERPRETATION OF THE RADIO NUCLIDE SUBTRACTION SCAN IN PANCREATIC CARCINOMA.

AUTHOR(S): ANDREWS J T [Reprint author]; KIDD G; STEVEN L W; MCKAY W J; LICHTENSTEIN M
CORPORATE SOURCE: DEP NUCL MED, R MELB HOSP, MELBOURNE, VICTORIA, AUST
SOURCE: Australasian Radiology, (1977) Vol. 21, No. 1,
pp. 53-59.
CODEN: AURDAW. ISSN: 0004-8461.

DOCUMENT TYPE: Article
FILE SEGMENT: BA
LANGUAGE: ENGLISH

AB An attempt was made to indicate the different types of radionuclide subtraction scan patterns that can occur in carcinoma of the pancreas. A follow up was made of 44 patients with established clinical or proven histological diagnosis of carcinoma of the pancreas from a total series of 800 who were presented for radionuclide subtraction scanning. The study does not attempt to analyze results in pancreatic carcinoma but to indicate the type of scan presentations which can occur. It was interesting to find that > 1/3 of the patients studied presented with uptake of 75Se-selenomethionine in the tumor region and only a small number of the series revealed the tumor by a filling defect in an otherwise normal pancreatic scan. Despite the differing scan presentations of carcinoma of the pancreas it was not possible on the scan alone to differentiate a benign from a malignant lesion, but in each case the scan was abnormal and when taken within the clinical context could represent a carcinoma.

L5 ANSWER 43 OF 72 BIOSIS COPYRIGHT (c) 2008 The Thomson Corporation on STN

ACCESSION NUMBER: 1978:102522 BIOSIS
DOCUMENT NUMBER: PREV197815046022; BR15:46022
TITLE: STUDIES ON THE DIAGNOSTIC SIGNIFICANCE OF SERUM CARBOXY PEPTIDASE A ACTIVITY IN DIABETES MELLITUS.

AUTHOR(S): FUJII S; YAMAGATA S; TANAKA K; WADA M; AKAI T
SOURCE: Japanese Journal of Medicine, (1977) Vol. 16, No. 2, pp. 106-111.
CODEN: JJMDAT. ISSN: 0021-5120.

DOCUMENT TYPE: Article
FILE SEGMENT: BR
LANGUAGE: Unavailable

L5 ANSWER 44 OF 72 BIOSIS COPYRIGHT (c) 2008 The Thomson Corporation on STN

ACCESSION NUMBER: 1977:33496 BIOSIS
DOCUMENT NUMBER: PREV197713033496; BR13:33496
TITLE: DESIGN OF SELENIUM CONTAINING AMINO-ACIDS AS PANCREATIC IMAGING AGENTS.

AUTHOR(S): DAVIS M A; GIESE R W; NORTON H T; SADEH T
SOURCE: Chemica Scripta, (1975) Vol. 8A, pp. 108.
CODEN: CSRPB9. ISSN: 0004-2056.

DOCUMENT TYPE: Article
FILE SEGMENT: BR
LANGUAGE: Unavailable

L5 ANSWER 45 OF 72 BIOSIS COPYRIGHT (c) 2008 The Thomson Corporation on STN

ACCESSION NUMBER: 1976:86845 BIOSIS
DOCUMENT NUMBER: PREV197612086845; BR12:86845
TITLE: VIABLE AND NONViable TUMOR INCORPORATION OF LEAD-203 AND SELENIUM-75 SELENO METHIONINE.

AUTHOR(S): HAGAN P; CHAUNCEY D; AYRES P; HALPERN S
SOURCE: Journal of Nuclear Medicine, (1975) Vol. 16, No. 6, pp. 532.

CODEN: JNMEAQ. ISSN: 0161-5505.
DOCUMENT TYPE: Article
FILE SEGMENT: BR
LANGUAGE: Unavailable

L5 ANSWER 46 OF 72 BIOSIS COPYRIGHT (c) 2008 The Thomson Corporation on
STN
ACCESSION NUMBER: 1976:32198 BIOSIS
DOCUMENT NUMBER: PREV197612032198; BR12:32198
TITLE: GALLIUM-67 CITRATE IN THE DIAGNOSIS OF UPPER ABDOMINAL LYMPHOMAS.
AUTHOR(S): ANDREWS J T; SULLIVAN J R; MCKAY W J
SOURCE: Australian and New Zealand Journal of Medicine, (1975) Vol. 5, No. 4, pp. 385.
CODEN: ANZJB8. ISSN: 0004-8291.

DOCUMENT TYPE: Article
FILE SEGMENT: BR
LANGUAGE: Unavailable

L5 ANSWER 47 OF 72 BIOSIS COPYRIGHT (c) 2008 The Thomson Corporation on
STN
ACCESSION NUMBER: 1975:237620 BIOSIS
DOCUMENT NUMBER: PREV197560067616; BA60:67616
TITLE: TUMOR IMAGING RADIO PHARMACEUTICALS.
AUTHOR(S): PATERSON A H G; MCCREADY V R
SOURCE: British Journal of Radiology, (1975) Vol. 48, No. 571, pp. 520-531.
CODEN: BJRAAP. ISSN: 0007-1285.

DOCUMENT TYPE: Article
FILE SEGMENT: BA
LANGUAGE: Unavailable

L5 ANSWER 48 OF 72 BIOSIS COPYRIGHT (c) 2008 The Thomson Corporation on
STN
ACCESSION NUMBER: 1975:103520 BIOSIS
DOCUMENT NUMBER: PREV197559003520; BA59:3520
TITLE: SCANNING OF ACCESSORY SINUSES OF THE NOSE WITH SELENIUM-75 SELENO METHIONINE IN MALIGNANT TUMORS.
AUTHOR(S): GORSKII L A; PRIKHOD'KO A G; GABUNIYA R I; SENYUKOV M V
SOURCE: Meditsinskaya Radiologiya, (1974) Vol. 19, No. 2, pp. 24-29.
CODEN: MERAA9. ISSN: 0025-8334.

DOCUMENT TYPE: Article
FILE SEGMENT: BA
LANGUAGE: Unavailable

L5 ANSWER 49 OF 72 BIOSIS COPYRIGHT (c) 2008 The Thomson Corporation on
STN
ACCESSION NUMBER: 1975:79060 BIOSIS
DOCUMENT NUMBER: PREV197511079060; BR11:79060
TITLE: PANCREATIC CANCER.
AUTHOR(S): DIAMOND D; FISHER B
SOURCE: Surgical Clinics of North America, (1975) Vol. 55, No. 2, pp. 363-376.
CODEN: SCNAA7. ISSN: 0039-6109.

DOCUMENT TYPE: Article
FILE SEGMENT: BR
LANGUAGE: Unavailable

L5 ANSWER 50 OF 72 BIOSIS COPYRIGHT (c) 2008 The Thomson Corporation on
STN

ACCESSION NUMBER: 1975:30984 BIOSIS
DOCUMENT NUMBER: PREV197511030984; BR11:30984
TITLE: RADIO LABELED AMINO-ACIDS ANTIGENS AND ORGANIC COMPOUNDS IN TUMOR LOCALIZATION.

AUTHOR(S): SPENCER R P
SOURCE: (1974) pp. 171-178. CROLL, MILLARD N. ET AL.
(ED.). NEW TECHNIQUES IN TUMOR LOCALIZATION AND RADIO IMMUNOASSAY. SYMPOSIUM. PHILADELPHIA, PA., U.S.A., MAY 3-5, 1973. XII+218P. ILLUS. JOHN WILEY AND SONS: NEW YORK, N.Y., U.S.A.; LONDON, ENGLAND. ISBN 0-471-18836-0.

DOCUMENT TYPE: Book
FILE SEGMENT: BR
LANGUAGE: Unavailable

L5 ANSWER 51 OF 72 BIOSIS COPYRIGHT (c) 2008 The Thomson Corporation on STN

ACCESSION NUMBER: 1974:191159 BIOSIS
DOCUMENT NUMBER: PREV197458020853; BA58:20853
TITLE: NONCHROMAFFIN PARA GANGLIOMATOSIS MANIFESTING AS A COLD THYROID NODULE.
AUTHOR(S): HAEGERT D G; WANG N S; FARRER P A; SEEMAYER T A; THELMO W
SOURCE: American Journal of Clinical Pathology, (1974)
Vol. 61, No. 4, pp. 561-570.
CODEN: AJCPAI. ISSN: 0002-9173.

DOCUMENT TYPE: Article
FILE SEGMENT: BA
LANGUAGE: Unavailable

L5 ANSWER 52 OF 72 BIOSIS COPYRIGHT (c) 2008 The Thomson Corporation on STN

ACCESSION NUMBER: 1974:191060 BIOSIS
DOCUMENT NUMBER: PREV197458020754; BA58:20754
TITLE: FALSE NEGATIVE SELENIUM-75 SELENO METHIONINE SCANS IN PRIMARY LIVER CANCER.
AUTHOR(S): KEW M C; GEDDES E W; LEVIN J
SOURCE: Journal of Nuclear Medicine, (1974) Vol. 15, No. 4, pp. 234-236.
CODEN: JNMEOQ. ISSN: 0161-5505.

DOCUMENT TYPE: Article
FILE SEGMENT: BA
LANGUAGE: Unavailable

L5 ANSWER 53 OF 72 BIOSIS COPYRIGHT (c) 2008 The Thomson Corporation on STN

ACCESSION NUMBER: 1973:156327 BIOSIS
DOCUMENT NUMBER: PREV197355056320; BA55:56320
TITLE: PARATHYROID TUMOR COEXISTING WITH HYPERPLASIA IN A CASE OF PRIMARY HYPER PARATHYROIDISM.
AUTHOR(S): DAMIAN A; STOENESCU D; STOICA T; OPROIU C; JOVIN T
SOURCE: Revue Roumaine d'Endocrinologie, (1972) Vol. 9, No. 3, pp. 207-210.
CODEN: RRENAR. ISSN: 0035-4015.

DOCUMENT TYPE: Article
FILE SEGMENT: BA
LANGUAGE: Unavailable

L5 ANSWER 54 OF 72 BIOSIS COPYRIGHT (c) 2008 The Thomson Corporation on STN

ACCESSION NUMBER: 1973:95410 BIOSIS
DOCUMENT NUMBER: PREV197309095410; BR09:95410
TITLE: IN-VITRO MEASUREMENT OF GLOBULIN SYNTHESIZING CAPACITY OF LYMPHOCYTES USING SELENIUM-75 SELENO

METHIONINE.

AUTHOR(S): HASEGAWA M; YOSHIOKA H; IWASAKI I
SOURCE: Kaku Igaku, (1973) Vol. 10, No. 2, pp. 139-140.
CODEN: KAIGBZ. ISSN: 0022-7854.

DOCUMENT TYPE: Article
FILE SEGMENT: BR
LANGUAGE: Unavailable

L5 ANSWER 55 OF 72 BIOSIS COPYRIGHT (c) 2008 The Thomson Corporation on
STN

ACCESSION NUMBER: 1973:58176 BIOSIS
DOCUMENT NUMBER: PREV197309058176; BR09:58176
TITLE: SPECIFIC DETECTION OF HEPATIC CANCER USING DOUBLE
LABELING WITH SELENO METHIONINE 75 AND
COLLOIDAL GOLD.

AUTHOR(S): DE SAINT-LAURENT J; MILHAUD G
SOURCE: (1972) pp. 683-686. LAROCHE, GUY AND L.
JUSTIN-BESANCON. LES ENTRETIENS DE BICHAT 1972. MEDECINE ET
BIOLOGIE. (THE BICHAT CONFERENCES, 1972. MEDICINE AND
BIOLOGY.). 731P. ILLUS. EXPANSION SCIENTIFIQUE, FRANCAISE:
PARIS, FRANCE.

DOCUMENT TYPE: Book
FILE SEGMENT: BR
LANGUAGE: Unavailable

L5 ANSWER 56 OF 72 BIOSIS COPYRIGHT (c) 2008 The Thomson Corporation on
STN

ACCESSION NUMBER: 1973:57767 BIOSIS
DOCUMENT NUMBER: PREV197309057767; BR09:57767
TITLE: USEFULNESS OF SCINTIGRAPHY FOR DETECTING TUMOR
WITH GALLIUM-67 CITRATE AND SCINTILLATION CAMERA.

AUTHOR(S): HAMAMOTO K; MUKAI T; KOUSAKA T; MORI T; TORIZUKA K; SUZUKI
T; HONJYO I; ISOBE Y; MATSUDA S; KIMURA C
SOURCE: J. Coll. Sci. Teach., (1971) Vol. 9, pp. 5.
CODEN: JSCTBN. ISSN: 0095-8670.

DOCUMENT TYPE: Article
FILE SEGMENT: BR
LANGUAGE: Unavailable

L5 ANSWER 57 OF 72 BIOSIS COPYRIGHT (c) 2008 The Thomson Corporation on
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ACCESSION NUMBER: 1973:56996 BIOSIS
DOCUMENT NUMBER: PREV197309056996; BR09:56996
TITLE: QUANTITATIVE EVALUATION OF RADIO ISOTOPE DISTRIBUTION
IN-VIVO BY ISO SENSITIVE SCANNER PLUS 4096 WORD MULTI
CHANNEL ANALYZER COUPLING.

AUTHOR(S): HISADA K-I; KOJIMA K; MATSUDAIRA M; HIRAMATSU H
SOURCE: Radioisotopes, (1972) Vol. 21, No. 6, pp.
348-352.
CODEN: RAISAB. ISSN: 0033-8303.

DOCUMENT TYPE: Article
FILE SEGMENT: BR
LANGUAGE: Unavailable

L5 ANSWER 58 OF 72 BIOSIS COPYRIGHT (c) 2008 The Thomson Corporation on
STN

ACCESSION NUMBER: 1972:231530 BIOSIS
DOCUMENT NUMBER: PREV197254061524; BA54:61524
TITLE: THE DIAGNOSIS OF PRIMARY MALIGNANT TUMORS OF THE
LIVER FINDINGS IN 48 CONSECUTIVE PATIENTS.

AUTHOR(S): SHARPSTONE P; RAKE M O; SHILKIN K B; FLEISHER M R; LAWS J
W; WILLIAMS R

SOURCE: QJM, (1972) Vol. 41, No. 161, pp. 99-110.
CODEN: QJMEA7. ISSN: 0033-5622.
DOCUMENT TYPE: Article
FILE SEGMENT: BA
LANGUAGE: Unavailable

L5 ANSWER 59 OF 72 BIOSIS COPYRIGHT (c) 2008 The Thomson Corporation on
STN
ACCESSION NUMBER: 1972:225937 BIOSIS
DOCUMENT NUMBER: PREV197254055931; BA54:55931
TITLE: PANCREATO GAMMA PHOTO SCINTIGRAPHY HEPATOGRAPHY AND HEPATO
SCANNING IN CANCER OF THE PANCREATIC HEAD.
AUTHOR(S): STRUCHKOV V I; KASATKIN Y N; PURIZHANSKII I I; RUBIN M P;
EGOROVA A I
SOURCE: Vestnik Khirurgii Imenii I I Grekova, (1971) Vol.
107, No. 12, pp. 3-8.
CODEN: VKHGAG. ISSN: 0042-4625.
DOCUMENT TYPE: Article
FILE SEGMENT: BA
LANGUAGE: Unavailable

L5 ANSWER 60 OF 72 BIOSIS COPYRIGHT (c) 2008 The Thomson Corporation on
STN
ACCESSION NUMBER: 1972:126821 BIOSIS
DOCUMENT NUMBER: PREV197253026821; BA53:26821
TITLE: SPECIFIC DETECTION OF HEPATIC CANCER BY DOUBLE
MARKING WITH SELENIUM-75 SELENO
METHIONINE AND COLLOIDAL GOLD-198.
AUTHOR(S): SAINT-LAURENT J D; HADCHOUEL P; CAROLI J; MILHAUD G
SOURCE: Comptes Rendus Hebdomadaires des Seances de l'Academie des
Sciences Serie D Sciences Naturelles, (1971) Vol.
272, No. 25, pp. 3221-3224.
DOCUMENT TYPE: Article
FILE SEGMENT: BA
LANGUAGE: Unavailable

L5 ANSWER 61 OF 72 BIOSIS COPYRIGHT (c) 2008 The Thomson Corporation on
STN
ACCESSION NUMBER: 1972:36864 BIOSIS
DOCUMENT NUMBER: PREV197208036864; BR08:36864
TITLE: METHODS FOR THE DETERMINATION OF ENDOCRINOUSLY ACTIVE
TUMORS.
AUTHOR(S): VAN DE WEYER K H
SOURCE: Medizinische Welt, (1971) Vol. 41, pp. 1618.
CODEN: MEWEAC. ISSN: 0025-8512.
DOCUMENT TYPE: Article
FILE SEGMENT: BR
LANGUAGE: Unavailable

L5 ANSWER 62 OF 72 BIOSIS COPYRIGHT (c) 2008 The Thomson Corporation on
STN
ACCESSION NUMBER: 1972:30090 BIOSIS
DOCUMENT NUMBER: PREV197208030090; BR08:30090
TITLE: RADIO PHARMACEUTICALS IN THE EVALUATION OF NEOPLASTIC
DISEASES A VALUABLE AID IN THE STAGING OF LYMPHOMA.
AUTHOR(S): WEINSTEIN M; MIALE A
SOURCE: Blood, (1970) Vol. 36, No. 6, pp. 859.
CODEN: BLOOA. ISSN: 0006-4971.
DOCUMENT TYPE: Article
FILE SEGMENT: BR
LANGUAGE: Unavailable

L5 ANSWER 63 OF 72 BIOSIS COPYRIGHT (c) 2008 The Thomson Corporation on
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ACCESSION NUMBER: 1971:151826 BIOSIS
DOCUMENT NUMBER: PREV197152061826; BA52:61826
TITLE: STOMACH UPTAKE SIMULATING TUMOR FOLLOWING THE
INTRA ARTERIAL INJECTION OF SELENIUM-75 SELENO
METHIONINE.
AUTHOR(S): QUINN J L III; NUDELMAN E J; CUMMINS G
SOURCE: Radiology, (1971) Vol. 98, No. 2, pp. 341-342.
CODEN: RADLAX. ISSN: 0033-8419.
DOCUMENT TYPE: Article
FILE SEGMENT: BA
LANGUAGE: Unavailable

L5 ANSWER 64 OF 72 BIOSIS COPYRIGHT (c) 2008 The Thomson Corporation on
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ACCESSION NUMBER: 1971:76398 BIOSIS
DOCUMENT NUMBER: PREV197107076398; BR07:76398
TITLE: THE VALUE OF SCINTI SCANNING IN THE DIAGNOSIS OF HEPATIC
TUMORS USING BOTH SELENO
METHIONINE AND TECHNETIUM.
AUTHOR(S): RAKE M O; EDDLESTON A; PAGALTOS S; WILLIAMS R; OSBORNE S B
SOURCE: British Journal of Radiology, (1970) Vol. 43, No.
515, pp. 830.
CODEN: BJRAAP. ISSN: 0007-1285.
DOCUMENT TYPE: Article
FILE SEGMENT: BR
LANGUAGE: Unavailable

L5 ANSWER 65 OF 72 BIOSIS COPYRIGHT (c) 2008 The Thomson Corporation on
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ACCESSION NUMBER: 1971:22792 BIOSIS
DOCUMENT NUMBER: PREV197107022792; BR07:22792
TITLE: STEPS IN THE DIAGNOSIS OF 3 FUNCTIONING ENDOCRINE
TUMORS.
AUTHOR(S): DOOLAS A
SOURCE: Surgical Clinics of North America, (1971) Vol.
51, No. 1, pp. 195-210.
CODEN: SCNAA7. ISSN: 0039-6109.
DOCUMENT TYPE: Article
FILE SEGMENT: BR
LANGUAGE: Unavailable

L5 ANSWER 66 OF 72 BIOSIS COPYRIGHT (c) 2008 The Thomson Corporation on
STN

ACCESSION NUMBER: 1970:77589 BIOSIS
DOCUMENT NUMBER: PREV197006077589; BR06:77589
TITLE: SELENO METHIONINE CONCENTRATION IN NECK
MASSES OR THYROID AND NON-THYROIDAL ORIGIN.
AUTHOR(S): WEINSTEIN M B
SOURCE: Southern Medical Journal, (1969) Vol. 62, No. 11,
pp. 1437.
CODEN: SMJOAV. ISSN: 0038-4348.
DOCUMENT TYPE: Article
FILE SEGMENT: BR
LANGUAGE: Unavailable

L5 ANSWER 67 OF 72 BIOSIS COPYRIGHT (c) 2008 The Thomson Corporation on
STN

ACCESSION NUMBER: 1970:21462 BIOSIS
DOCUMENT NUMBER: PREV197006021462; BR06:21462
TITLE: SELENIUM-75 SELENO METHIONINE AS

TUMOR DIAGNOSTIC AGENT CLINICAL AND EXPERIMENTAL STUDY.

AUTHOR(S): JOVANOVIC D; BOUCKAERT A
SOURCE: (1969) pp. 753-766. ERICSON, ANNE (EDITOR).
MEDICAL RADIOISOTOPE SCINTIGRAPHY. VOL. II. 934P. ILLUS.
INTERNATIONAL ATOMIC ENERGY AGENCY: VIENNA, AUSTRIA (DIST.
IN THE U.S. BY UNIPUB, INC.: NEW YORK, N.Y.). 1969.
DOCUMENT TYPE: Book
FILE SEGMENT: BR
LANGUAGE: Unavailable

L5 ANSWER 68 OF 72 BIOSIS COPYRIGHT (c) 2008 The Thomson Corporation on
STN

ACCESSION NUMBER: 1969:47018 BIOSIS
DOCUMENT NUMBER: PREV196905047018; BR05:47018
TITLE: NEOPL TUMOR AND ORGAN UPTAKE OF NUTRIENTS
RELATIONSHIP TO BLOOD FLOW ABSTRACT SELENIUM-75
SELENO METHIONINE RADIO RUBIDIUM
SAPIRSTEINS TECHNIQUE INST GAMMA RAY SPECTROSCOPY MOUSE
LYMPH ADENOMATOUS NODES NEOPL MAMMARY ADENO CARCINOMA.

AUTHOR(S): SPENCER R P; CORNELIUS E A
SOURCE: Federation Proceedings, (1969) Vol. 28, No. 2,
pp. 829.
CODEN: FEPRA7. ISSN: 0014-9446.

DOCUMENT TYPE: Article
FILE SEGMENT: BR
LANGUAGE: Unavailable

L5 ANSWER 69 OF 72 BIOSIS COPYRIGHT (c) 2008 The Thomson Corporation on
STN

ACCESSION NUMBER: 1968:115900 BIOSIS
DOCUMENT NUMBER: PREV19684900115921; BA49:115921
TITLE: Parathyroid scanning in the human with seleno-methionine-75Se.

AUTHOR(S): McGOWAN, MARY G.; BELL, T. K.; SOYANNWO, M. A. O.; FENTON,
S. S. A.; OREPOULOS, D.
CORPORATE SOURCE: Queen's Univ., Dep. Med., Belfast, N. Ire., UK
SOURCE: BRIT J RADIOL, (1968) Vol. 41, No. 484, pp.
300-306.

DOCUMENT TYPE: Article
FILE SEGMENT: BA
LANGUAGE: Unavailable
ENTRY DATE: Entered STN: May 2007
Last Updated on STN: May 2007

AB The neck area was scanned in 8 patients at intervals for 10 to 90 min. following the intravenous injection of 200 μ Ci of selenomethionine-75Se. Seven of the patients were subsequently explored and one or more enlarged parathyroids were found in all of them. The identification of active areas on the scans did not correspond well with the operation finding. The concentration of the isotope in the parathyroids was 3 to 4 times that in circulating blood, while in lymph nodes it was about twice that of blood. The concentration in the thyroid was not much above that of blood but despite this it is thought that the large bulk of the thyroid must make a considerable contribution to the background radioactivity in the neck. Apparent areas of concentration of selenomethionine-75Se were in the knee area 90 min. after injection. An *in vitro* study suggested that it would be impossible to detect small parathyroid tumors unless a concentration of 4-fold or more above blood level can be obtained. ABSTRACT AUTHORS: Authors

L5 ANSWER 70 OF 72 MEDLINE on STN
ACCESSION NUMBER: 95226450 MEDLINE

DOCUMENT NUMBER: PubMed ID: 7711067
TITLE: Isolation and expression of rat thymidylate synthase cDNA: phylogenetic comparison with human and mouse thymidylate synthases.
AUTHOR: Ciesla J; Weiner K X; Weiner R S; Reston J T; Maley G F;
Maley F
CORPORATE SOURCE: Nencki Institute of Experimental Biology, Department of
Cellular Biochemistry, Warsaw, Poland.
CONTRACT NUMBER: CA44355 (United States NCI)
SOURCE: Biochimica et biophysica acta, (1995 Apr 4) Vol.
1261, No. 2, pp. 233-42.
Journal code: 0217513. ISSN: 0006-3002.
PUB. COUNTRY: Netherlands
DOCUMENT TYPE: (COMPARATIVE STUDY)
Journal; Article; (JOURNAL ARTICLE)
(RESEARCH SUPPORT, U.S. GOV'T, NON-P.H.S.)
(RESEARCH SUPPORT, U.S. GOV'T, P.H.S.)
LANGUAGE: English
FILE SEGMENT: Priority Journals
OTHER SOURCE: GENBANK-L12138
ENTRY MONTH: 199505
ENTRY DATE: Entered STN: 24 May 1995
Last Updated on STN: 6 Feb 1998
Entered Medline: 15 May 1995

AB Two cDNA clones representing rat hepatoma thymidylate synthase (rTS) were isolated from a lambda ZAP II cDNA library using as a probe a fragment of the human TS cDNA. The two were identical except that one was missing 50 bp and the other 23 bp corresponding to the 5' coding region of the protein. The missing region was obtained by screening a rat genomic library. The open reading frame of rTS cDNA encoded 921 bp encompassing a protein of 307 amino acids with a calculated molecular mass of 35,015 Da. Rat hepatoma TS appears identical to normal rat thymus TS and the two sequences differ from mouse TS in the same eight amino acid residues. Six of these differences are in the first 21 amino acids from the amino-end. The human enzyme differed from rat and mouse TS at 17 residues where the latter two were identical, with most changes being conservative in nature. The three species differed completely at only four sites. Because the mouse TS shares four amino acids with human TS at sites which differ from rTS and a comparable situation does not exist between rTS and human TS, it is suggested that mouse TS is closer to human TS phylogenetically than rTS. The polymerase chain reaction was used to subclone the protein coding region of rTS into a high expression vector, which expressed rTS in Escherichia coli to the extent of 10 to 20% of its cellular protein. Although the amino-end of the amplified TS was unblocked, that isolated from a FUdR-resistant rat hepatoma cell line contained mostly N-acetylmethionine on its N-terminal end, a finding that may have significant regulatory consequences, which are discussed. The TS level in the resistant cell line was 60 to 70-fold higher than normal which was found to be associated with both multiple gene copies and an expanded TS mRNA pool.

L5 ANSWER 71 OF 72 MEDLINE on STN
ACCESSION NUMBER: 94199658 MEDLINE
DOCUMENT NUMBER: PubMed ID: 8149465
TITLE: Characterization of tissue selenium profiles and
anticarcinogenic responses in rats fed natural sources of
selenium-rich products.
AUTHOR: Ip C; Lisk D J
CORPORATE SOURCE: Department of Surgical Oncology, Roswell Park Cancer
Institute, Buffalo, NY 14263.
CONTRACT NUMBER: CA 27706 (United States NCI)
SOURCE: Carcinogenesis, (1994 Apr) Vol. 15, No. 4, pp.

573-6.
PUB. COUNTRY: Journal code: 8008055. ISSN: 0143-3334.
DOCUMENT TYPE: ENGLAND: United Kingdom
Journal; Article; (JOURNAL ARTICLE)
(RESEARCH SUPPORT, U.S. GOV'T, P.H.S.)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 199405
ENTRY DATE: Entered STN: 23 May 1994
Last Updated on STN: 23 May 1994
Entered Medline: 12 May 1994

AB The present report describes the biological effects associated with the feeding of three selenium-rich natural products in rats: high-selenium garlic, high-selenium onion and Brazil nut. The first two are experimental crops cultivated with selenium fertilization. Brazil nut is probably the only unadulterated high-selenium food that is available commercially. Tissue selenium profiles, liver glutathione concentrations and mammary cancer inhibition (in the dimethylbenz[a]anthracene model) were the endpoints of investigation. Parallel designs were set up to compare the three high-selenium products with selenite and selenomethionine. Previous studies have shown that treatment with seleno-methionine resulted in significantly greater tissue selenium accumulation, particularly in skeletal muscle, than treatment with selenite. In contrast, selenite, but not selenomethionine, induced a modest increase in liver glutathione concentrations. The objective was to determine whether the high-selenium natural products elicited responses that were similar to that of selenite or selenomethionine. Our experiments suggested that the high-selenium garlic and onion might have some unique attributes. First, their ingestion did not lead to an exaggerated accumulation of tissue selenium, a concern that was shared by both selenomethionine and Brazil nut. Second, unlike selenite, they did not cause any perturbation in glutathione homeostasis. Third, they expressed good anticancer activity that was equal to, if not better than, that of selenite. The chemical form(s) of selenium present in the high-selenium Allium vegetables will be discussed in relation to the manifestation of the above characteristics.

L5 ANSWER 72 OF 72 MEDLINE on STN
ACCESSION NUMBER: 87230782 MEDLINE
DOCUMENT NUMBER: PubMed ID: 3588166
TITLE: Myasthenia gravis: ^{75}Se lreno-methionine scanning of thymus gland.
AUTHOR: Szobor A; Fornet B
SOURCE: Acta medica Hungarica, (1986) Vol. 43, No. 3, pp. 243-8.
Journal code: 8400269. ISSN: 0236-5286.
PUB. COUNTRY: Hungary
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 198707
ENTRY DATE: Entered STN: 5 Mar 1990
Last Updated on STN: 5 Mar 1990
Entered Medline: 17 Jul 1987

AB The ^{75}Se -seleno-methionine isotope thymus scanning was examined in a series of patients with myasthenia gravis. The method proved useful and informative in the diagnostics of myasthenia. Prior to thymectomy, the thymic tumour or a large gland could be observed and some hints could be gained concerning the biological activity of the gland. After the operation, the success of thymectomy could be checked and later a possible recidive could be shown or excluded. In non-operative cases the change in thymic activity could be followed which is an important sign

of a malignant or tumorous growth of the thymus.

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NEWS 11 SEP 13   INPADOCDB enhanced with monthly SDI frequency
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                  Zentralblatt
NEWS 16 OCT 19   BEILSTEIN updated with new compounds
NEWS 17 NOV 15   Derwent Indian patent publication number format enhanced
NEWS 18 NOV 19   WPIX enhanced with XML display format
NEWS 19 NOV 30   ICSD reloaded with enhancements
NEWS 20 DEC 04   LINPADOCDB now available on STN
NEWS 21 DEC 14   BEILSTEIN pricing structure to change
NEWS 22 DEC 17   USPATOLD added to additional database clusters
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NEWS 23 DEC 17 IMSDRUGCONF removed from database clusters and STN
NEWS 24 DEC 17 DGENE now includes more than 10 million sequences
NEWS 25 DEC 17 TOXCENTER enhanced with 2008 MeSH vocabulary in MEDLINE segment
NEWS 26 DEC 17 MEDLINE and LMEDLINE updated with 2008 MeSH vocabulary
NEWS 27 DEC 17 CA/CAPLus enhanced with new custom IPC display formats
NEWS 28 DEC 17 STN Viewer enhanced with full-text patent content from USPATOLD
NEWS 29 JAN 02 STN pricing information for 2008 now available
NEWS 30 JAN 16 CAS patent coverage enhanced to include exemplified prophetic substances
NEWS 31 JAN 28 USPATFULL, USPAT2, and USPATOLD enhanced with new custom IPC display formats
NEWS 32 JAN 28 MARPAT searching enhanced
NEWS 33 JAN 28 USGENE now provides USPTO sequence data within 3 days of publication
NEWS 34 JAN 28 TOXCENTER enhanced with reloaded MEDLINE segment
NEWS 35 JAN 28 MEDLINE and LMEDLINE reloaded with enhancements
NEWS 36 FEB 08 STN Express, Version 8.3, now available

NEWS EXPRESS FEBRUARY 08 CURRENT WINDOWS VERSION IS V8.3,
AND CURRENT DISCOVER FILE IS DATED 24 JANUARY 2008

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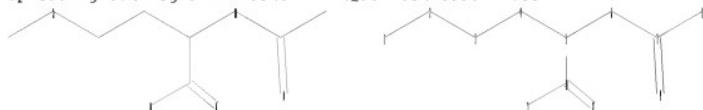
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chain bonds :
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exact/norm bonds :
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exact bonds :
3-4 4-5 5-10 7-8
normalized bonds :
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L2 2 SEA FAM FUL L1

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L2 ANSWER 1 OF 2 REGISTRY COPYRIGHT 2008 ACS on STN
RN 210910-25-1 REGISTRY

ED Entered STN: 06 Sep 1998
CN Butanoic acid, 2-(acetylamino)-4-(methylseleno)-, (2S)- (CA INDEX NAME)
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LC STN Files: CA, CAPLUS, CHEMCATS, TOXCENTER, USPATFULL

Absolute stereochemistry.



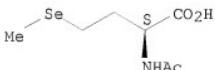
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3 REFERENCES IN FILE CA (1907 TO DATE)
3 REFERENCES IN FILE CAPLUS (1907 TO DATE)

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L2 ANSWER 1 OF 2 REGISTRY COPYRIGHT 2008 ACS on STN
RN 210910-25-1 REGISTRY
ED Entered STN: 06 Sep 1998
CN Butanoic acid, 2-(acetylamino)-4-(methylseleno)-, (2S)- (CA INDEX NAME)
FS STEREOSEARCH
MF C7 H13 N O3 Se
SR CA
LC STN Files: CA, CAPLUS, CHEMCATS, TOXCENTER, USPATFULL

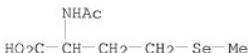
Absolute stereochemistry.



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

3 REFERENCES IN FILE CA (1907 TO DATE)
3 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L2 ANSWER 2 OF 2 REGISTRY COPYRIGHT 2008 ACS on STN
RN 174463-50-4 REGISTRY
ED Entered STN: 22 Mar 1996
CN Butanoic acid, 2-(acetylamino)-4-(methylseleno)- (CA INDEX NAME)
MF C7 H13 N O3 Se
SR CA
LC STN Files: CA, CAPLUS, CASREACT, CHEMCATS



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

2 REFERENCES IN FILE CA (1907 TO DATE)
2 REFERENCES IN FILE CAPLUS (1907 TO DATE)

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=> s 12
L3 5 L2

=> d 13

L3 ANSWER 1 OF 5 CAPLUS COPYRIGHT 2008 ACS on STN
AN 2005:14419 CAPLUS
DN 142:114471
TI Preparation of glycosylated amino acids, proteins and peptides via olefin metathesis reactions
IN Davis, Benjamin Guy; Kramer, Holger Bernd Ralf
PA Isis Innovation Limited, UK
SO PCT Int. Appl., 48 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 1

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|------------------|---|----------|-----------------|----------|
| PI WO 2005000873 | A1 | 20050106 | WO 2004-GB2738 | 20040624 |
| W: | AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH,
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GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC,
LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI,
NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY,
TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW,
RW: BW, GH, GM, KE, LS, MW, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, | | | |

AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK,
EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE,
SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE,
SN, TD, TG

PRAI GB 2003-14741 A 20030624
RE.CNT 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD
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=> d 13 ibib abs 1-5

L3 ANSWER 1 OF 5 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 2005:14419 CAPLUS
DOCUMENT NUMBER: 142:114471
TITLE: Preparation of glycosylated amino acids, proteins and
peptides via olefin metathesis reactions
INVENTOR(S): Davis, Benjamin Guy; Kramer, Holger Bernd Ralf
PATENT ASSIGNEE(S): Isis Innovation Limited, UK
SOURCE: PCT Int. Appl., 48 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|--|------|----------|-----------------|----------|
| WO 2005000873 | A1 | 20050106 | WO 2004-GB2738 | 20040624 |
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GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC,
LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI,
NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY,
TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW
RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW,
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EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE,
SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE,
SN, TD, TG | | | | |

PRIORITY APFLN. INFO.: GB 2003-14741 A 20030624
AB A method for the preparation of a glycosylated amino acid, protein or peptide comprises reacting an unprotected carbohydrate containing a carbon-carbon double bond (e.g., an allyl or vinyl C-glycoside) with an amino acid, a protein or a peptide containing a side-chain carbon-carbon double bond under olefin metathesis reaction conditions. The side-chain carbon-carbon double bond is introduced by (a) oxidizing the sulfur in methionine or the selenium in selenomethione or homoselenocysteine and (b) eliminating the sulfoxide or selenoxide. Thus, 3-(α -D-glucopyranosyl)propene, prepared by pivaloylation-allylation of glucose, was reacted with vinylglycine (vG) tripeptide Ac-vG-Ser-Phe-OMe in the presence of Grubbs-Hoveyda catalyst to afford the desired cross-metathesis product in mixture with the C-glycoside homodimer byproduct.

REFERENCE COUNT: 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L3 ANSWER 2 OF 5 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 2004:467738 CAPLUS
DOCUMENT NUMBER: 141:17591
TITLE: Agent having a destructive effect on malignant tumors
and method for the production
INVENTOR(S): Groke, Karl; Herwig, Ralf
PATENT ASSIGNEE(S): C.Y.L. Handelsges. m.b.H., Austria; Ferdinand, Peter

SOURCE: PCT Int. Appl., 35 pp.
 DOCUMENT TYPE: Patent
 LANGUAGE: German
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|------|----------|-----------------|------------|
| WO 2004047832 | A1 | 20040610 | WO 2003-EP50712 | 20031013 |
| W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW | | | | |
| RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BE, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG | | | | |
| AT 2002001778 | A | 20040815 | AT 2002-1778 | 20021127 |
| AT 412447 | B | 20050325 | | |
| CA 2507273 | A1 | 20040610 | CA 2003-2507273 | 20031013 |
| AU 2003285351 | A1 | 20040618 | AU 2003-285351 | 20031013 |
| EP 1565176 | A1 | 20050824 | EP 2003-778338 | 20031013 |
| EP 1565176 | B1 | 20060524 | | |
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| JP 2006508998 | T | 20060316 | JP 2004-554531 | 20031013 |
| AT 326958 | T | 20060615 | AT 2003-778338 | 20031013 |
| PT 1565176 | T | 20061031 | PT 2003-778338 | 20031013 |
| ES 2268452 | T3 | 20070316 | ES 2003-778338 | 20031013 |
| US 2006292218 | A1 | 20061228 | US 2006-536777 | 20060907 |
| PRIORITY APPLN. INFO.: | | | AT 2002-1778 | A 20021127 |
| | | | EP 2003-778338 | A 20031013 |
| | | | WO 2003-EP50712 | W 20031013 |

AB Disclosed is an agent which has a destructive effect on malignant tumors and contains alpha-ketoglutaric acid, N-acetyl-seleno-L-methionine, N-acetyl-L-methionine, and a compound that is capable of forming azomethine and is selected among the group 5-hydroxymethylfurfural, dehydroascorbic acid, maltol, and vanillin as an active substance, 5-hydroxymethylfurfural being preferred. The inventive agent can be used in the form of an infusion, in an oral or rectal form of administration, or as an irrigation in cancer therapy. The treatment of cancer patients with the following infusion solution is reported: α -ketoglutaric acid 9.0 g/L; 5-hydroxymethyl furfural 3.0 g/L; N-acetyl-seleno-L-methionine 2.0 mg/L; N-acetyl-L-methionine 100.00 mg/L; glucose 30.0 g/L; sodium and potassium ions to set pH.

REFERENCE COUNT: 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L3 ANSWER 3 OF 5 CAPLUS COPYRIGHT 2008 ACS on STN
 ACCESSION NUMBER: 1998:485713 CAPLUS
 DOCUMENT NUMBER: 129:146163
 TITLE: Acylase I-catalyzed deacetylation of N-acetyl-L-cysteine and S-alkyl-N-acetyl-L-cysteines
 AUTHOR(S): Uttamsingh, Vinita; Keller, D. A.; Anders, M. W.
 CORPORATE SOURCE: Department of Pharmacology and Physiology, University of Rochester, Rochester, NY, 14642, USA
 SOURCE: Chemical Research in Toxicology (1998), 11(7), 800-809
 CODEN: CTOEC; ISSN: 0893-228X
 PUBLISHER: American Chemical Society

DOCUMENT TYPE: Journal
LANGUAGE: English
AB The aminoacylase that catalyzes the hydrolysis of N-acetyl-L-cysteine (NAC) was identified as acylase I after purification by column chromatog. and electrophoretic anal. Rat kidney cytosol was fractionated by ammonium sulfate precipitation, and the proteins were separated by ion-exchange column chromatog., gel-filtration column chromatog., and hydrophobic interaction column chromatog. Acylase activity with NAC and N-acetyl-L-methionine (NAM), a known substrate for acylase I, as substrates cooled during all chromatog. steps. Sodium dodecyl sulfate-polyacrylamide gel electrophoresis showed that the protein was purified to near homogeneity and had a subunit Mr of 43 000, which is identical with the Mr of acylase I from porcine kidney and bovine liver. N-Butylmalonic acid was a slow-binding inhibitor of acylase I and inhibited the deacetylation of NAC with a Ki of 192 ± 27 μ M. These results show that acylase I catalyzes the deacetylation of NAC. The acylase I-catalyzed deacetylation of a range of S-alkyl-N-acetyl-L-cysteines, their carbon and oxygen analogs, and the selenium analog of NAM was also studied with porcine kidney acylase I. The specific activity of the acylase I-catalyzed deacetylation of these substrates was related to their calculated molar volumes and log P values. The S-alkyl-N-acetyl-L-cysteines with short (C0-C3) and unbranched S-alkyl substituents were good acylase I substrates, whereas the S-alkyl-N-acetyl-L-cysteines with long (>C3) and branched S-alkyl substituents were poor acylase I substrates. The carbon and oxygen analogs of S-methyl-N-acetyl-L-cysteine and the carbon analog of S-ethyl-N-acetyl-L-cysteine were poor acylase I substrates, whereas the selenium analog of NAM was a good acylase I substrate.
REFERENCE COUNT: 50 THERE ARE 50 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L3 ANSWER 4 OF 5 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 1997:722992 CAPLUS
DOCUMENT NUMBER: 127:331721
TITLE: L-methionine related L-amino acids by acylase cleavage of their corresponding N-acetyl-DL-derivatives
AUTHOR(S): Bommarius, Andreas S.; Drauz, Karlheinz; Gunther, Kurt; Knaup, Gunter; Schwarm, Michael
CORPORATE SOURCE: Degussa AG, Specialty Chemicals, R and D Fine Chemicals, Hanau, D-63403, Germany
SOURCE: Tetrahedron: Asymmetry (1997), 8(19), 3197-3200
CODEN: TASYE3; ISSN: 0957-4166
PUBLISHER: Elsevier
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 127:331721
AB Acylase I from *Aspergillus oryzae* is an even more useful enzyme than suggested so far. Besides standard amino acids such as L-Met, L-Val and L-Phe, a number of addnl. sulfur- and selenium-containing amino acids can be obtained at useful reaction rates and in very high enantiomeric purity by kinetic resolution of the resp. N-acetyl-DL-amino acids.
REFERENCE COUNT: 19 THERE ARE 19 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L3 ANSWER 5 OF 5 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 1996:30201 CAPLUS
DOCUMENT NUMBER: 124:203067
TITLE: A New Efficient Synthesis of Acetyltelluro- and Acetyl selenomethionine and Their Use in the Biosynthesis of Heavy-Atom Protein Analogs
AUTHOR(S): Karnbrock, Wilhelm; Weyher, Elisabeth; Budisa, Nediljko; Huber, Robert; Moroder, Luis
CORPORATE SOURCE: Max-Planck-Institut fuer Biochemie, Martinsried,

SOURCE: 82152, Germany
Journal of the American Chemical Society (1996),
118(4), 913-14
CODEN: JACSAT; ISSN: 0002-7863

PUBLISHER: American Chemical Society
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 124:203067

AB N-Acetyl-DL-telluromethionine and N-acetyl-DL-selenomethionine were obtained in good yields upon reaction of racemic 2-(acetylamino)butyrolactone with MeTeLi and MeSeLi, resp., and their enantioselective hydrolysis with aminoacylase generated the related L-amino acids. The biosynthesis of all-Met(Te)- and all-Met(Se)-annexin V with the racemic acetyl derivs. was as efficient, if not better than the use of the related L-amino acids.

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FILE 'MEDLINE' ENTERED AT 10:01:36 ON 20 FEB 2008

=> s (seleno or selenium or selenomethionine) and acetyl

L4 124 (SELENO OR SELINIUM OR SELENOMETHIONINE) AND ACETYL

=> dup rem

ENTER L# LIST OR (END):14

PROCESSING COMPLETED FOR L4

L5 80 DUP REM L4 (44 DUPLICATES REMOVED)

=> s 15 and py<=2003

L6 60 L5 AND PY<=2003

=> d scan

L6 60 ANSWERS BIOSIS COPYRIGHT (c) 2008 The Thomson Corporation on STN
TI EFFECTS OF DRUGS ON ADHESION OF HUMAN PLATELETS.

IT Miscellaneous Descriptors

8 SELENO ISO URONIUM CYCLIC IMP ACETYL
SALICYLIC-ACID ADENOSINE DIPYRIDAMOLE CHLORPROMAZINE HEMATOLOGIC-DRUG
COMPUTER ANALYSIS

HOW MANY MORE ANSWERS DO YOU WISH TO SCAN? (1):end

=> s selenomethionine and acetyl

L7 59 SELENOMETHIONINE AND ACETYL

=> dup rem

ENTER L# LIST OR (END):17

PROCESSING COMPLETED FOR L7

L8

36 DUP REM L7 (23 DUPLICATES REMOVED)

=> s 18 and py<=2003

L9 20 L8 AND PY<=2003

=> d 19 ibib abs 1-20

L9 ANSWER 1 OF 20 BIOSIS COPYRIGHT (c) 2008 The Thomson Corporation on STN
ACCESSION NUMBER: 2003:11436 BIOSIS
DOCUMENT NUMBER: PREV200300011436
TITLE: Metabolic pathway for selenium in the body: Speciation by HPLC-ICP MS with enriched Se.
AUTHOR(S): Suzuki, K. T. [Reprint Author]; Ogra, Y.
CORPORATE SOURCE: Graduate School of Pharmaceutical Sciences, Chiba University, Chiba, 263-8522, Japan
ktsuzuki@p.chiba-u.ac.jp
SOURCE: Food Additives and Contaminants, (October 2002)
Vol. 19, No. 10, pp. 974-983. print.
ISSN: 0265-203X (ISSN print).
DOCUMENT TYPE: Article
LANGUAGE: English
ENTRY DATE: Entered STN: 18 Dec 2002
Last Updated on STN: 18 Dec 2002

AB Selenium (Se) is an ultramicro essential nutrient and both inorganic (selenite and selenate) and organic (selenocysteine and selenomethionine) forms of Se can be used as nutritional sources. Metabolic pathways for Se in the body were studied for selenite and selenate, with the use of enriched ^{82}Se , by speciation with separation by gel filtration HPLC and detection by element-specific mass spectrometry with ionization with inductively coupled argon plasma (HPLC-ICP MS). The concentrations of ^{82}Se in organs and body fluids and the distributions of their constituents depending on the dose and time after the intravenous administration of ^{82}Se -selenite and -selenate to rats were determined. Selenite was taken up by red blood cells within several minutes, reduced to selenide by glutathione, and then transported to the plasma, bound selectively to albumin and transferred to the liver. Contrary to selenite, intact selenate was either taken up directly by the liver or excreted into the urine. The ^{82}Se of selenite origin and that of selenate origin were detected in the forms of the two Se peak materials in the liver, A and B. The former one was methylated to the latter in vivo and in vitro. The latter one was identical with the major urinary metabolite and it was identified as Se-methyl-N-acetyl-selenohexosamine (selenosugar). The chemical species-specific metabolic pathway for Se was explained by the metabolic regulation through selenide as the assumed common intermediate for the inorganic and organic Se sources and as the checkpoint metabolite between utilization for the selenoprotein synthesis and methylation for the excretion of Se.

L9 ANSWER 2 OF 20 BIOSIS COPYRIGHT (c) 2008 The Thomson Corporation on STN

ACCESSION NUMBER: 2002:420926 BIOSIS

DOCUMENT NUMBER: PREV200200420926

TITLE: Reduction of protein carbonyls from saliva exposed to cigarette smoke by an antioxidant complex in a cigarette filter.

AUTHOR(S): Hersh, T. [Reprint author]; Reznick, A. Z.; Nagler, R.
CORPORATE SOURCE: Thione International, Inc., Atlanta, GA, USA
SOURCE: AAAS Annual Meeting and Science Innovation Exposition, (14-19 February, 2002) Vol. 168, pp. A94. print.
Meeting Info.: Annual Meeting of the American Association for the Advancement of Science. Boston, MA, USA. February 14-19, 2002.
DOCUMENT TYPE: Conference; (Meeting)

Conference; Abstract; (Meeting Abstract)
LANGUAGE: English
ENTRY DATE: Entered STN: 7 Aug 2002
Last Updated on STN: 7 Aug 2002

L9 ANSWER 3 OF 20 BIOSIS COPYRIGHT (c) 2008 The Thomson Corporation on STN
ACCESSION NUMBER: 2002:399542 BIOSIS
DOCUMENT NUMBER: PREV200200399542
TITLE: Modulation of apoptosis and improved redox metabolism with
the use of a new antioxidant formula.
AUTHOR(S): Mosca, Luciana [Reprint author]; Marcellini, Sonia;
Perluigi, Marzia; Mastriacovo, Paola; Moretti, Sonia;
Famularo, Giuseppe; Peluso, Ilaria; Santini, Gino; De
Simone, Claudio
CORPORATE SOURCE: Department of Biochemical Sciences, Faculty of Medicine,
University of Rome La Sapienza, p. le Aldo Moro 5, 00185,
Rome, Italy
luciana.mosca@uniromal.it
SOURCE: Biochemical Pharmacology, (1 April, 2002) Vol.
63, No. 7, pp. 1305-1314, print.
CODEN: BCPA6. ISSN: 0006-2952.
DOCUMENT TYPE: Article
LANGUAGE: English
ENTRY DATE: Entered STN: 24 Jul 2002
Last Updated on STN: 29 Aug 2002

AB Oxidative stress is involved in the pathogenesis of a wide spectrum of
diseases, implicating that strategies directed at counterbalancing
oxidative processes could have a role in clinical medicine. There is also
an evidence that oxidative stress acts as a major determinant of apoptotic
cell death. Many studies have reported favourable effects of antioxidant
formulas on several parameters of the oxidant-antioxidant balance, but
none of them has focused whether antioxidant formulas could modulate
apoptosis. We investigated in 20 healthy individuals the effect of
supplementation with a formula containing alpha-tocopherol, alpha-lipoic
acid, coenzyme Q10, carnitines, and selenomethionine, on plasma
oxidant status and peroxide levels, erythrocyte antioxidant enzymes,
lymphocyte apoptosis, and generation of ROS at the mitochondrial level.
Control subjects received only carnitines or an incomplete formula with
alpha-tocopherol, alpha-lipoic acid, coenzyme Q10, and
selenomethionine. Supplementation with the complete formula
resulted in a significant increase in the plasma antioxidant status that
was mirrored by a decrease in blood peroxide levels and a reduced
generation of ROS at the mitochondrial level. This was associated with a
significant decrease in the frequency of peripheral blood lymphocytes,
with either CD4 or CD8 phenotype undergoing apoptosis. Less consistent
results were found when either incomplete formula was used. Our study
suggests that supplementation with antioxidant formulas can modulate the
process of apoptosis under *in vivo* conditions. The clinical potential of
this strategy in the treatment of diseases with an elevated commitment to
apoptosis should be explored.

L9 ANSWER 4 OF 20 BIOSIS COPYRIGHT (c) 2008 The Thomson Corporation on STN
ACCESSION NUMBER: 2002:162190 BIOSIS
DOCUMENT NUMBER: PREV200200162190
TITLE: Comparative tissue-specific toxicities of 20 cancer
preventive agents using cultured cells from 8 different
normal human epithelia.
AUTHOR(S): Elmore, Eugene [Reprint author]; Luc, Thanh-Thuy; Steele,
Vernon E.; Redpath, J. Leslie
CORPORATE SOURCE: Department of Radiation Oncology, Irvine Medical Sciences
I, University of California, B149, Irvine, CA, 92697, USA
eelmore@uci.edu

SOURCE: In Vitro and Molecular Toxicology, (Fall, 2001)
Vol. 14, No. 3, pp. 191-207. print.
ISSN: 1097-9336.

DOCUMENT TYPE: Article
LANGUAGE: English

ENTRY DATE: Entered STN: 21 Feb 2002
Last Updated on STN: 26 Feb 2002

AB Comparative toxicity was determined for twenty potential chemopreventive agents in the Human Epithelial Cell Cytotoxicity (HECC) Assay using epithelial cell cultures from eight different tissues including: skin, kidney, breast, bronchus, cervix, prostate, oral cavity, and liver. The endpoints assessed were inhibition of: growth at 3 and 5 days; mitochondrial function; and proliferating cell nuclear antigen or albumin expression. Difluoromethylornithine (DFMO), s-allylcysteine, dehydroepiandrosterone (DHEA) analogue 8543, 1-selenomethionine, and vitamin E acetate were not toxic or only produced mild toxicity with all endpoints in all eight cell types. N-acetyl-l-cysteine, calcium chloride, DHEA, genistein, ibuprofen, indole-3-carbinol, 4-hydroxyphenylretinamide (4-HPR), oltipraz, piroxicam, phenylethyl isothiocyanate, 9-cis-retinoic acid, and p-xylylselenocyanate each showed at least a 10-fold decrease in their TC50 (toxic concentration that inhibited growth by 50%) for at least one endpoint with one or more cell types. For some agents such as DHEA and piroxicam, the TC50S for growth inhibition were 10-fold lower after 5 days compared with 3 days. Unique tissue-specific toxicity was observed for each toxic agent suggesting that tissue-specific effects are the rule rather than the exception. The HECC Assay is effective in identifying tissue-specific toxicity for chemopreventive agents and may help to identify potential toxicity problems in phase I human clinical trials.

L9 ANSWER 5 OF 20 BIOSIS COPYRIGHT (c) 2008 The Thomson Corporation on STN
ACCESSION NUMBER: 2001:573084 BIOSIS
DOCUMENT NUMBER: PREV200100573084

TITLE: Crystallization and preliminary X-ray crystallographic analysis of native and selenomethionyl recombinant tabtoxin-resistance protein complexed with acetyl-coenzyme A.

AUTHOR(S): He, Hongzhen; Ding, Yi; Cao, Zhenbo; Shao, Yu; Bartlam, Mark; Tang, Hong; Jiang, Fan; Liu, YWei; Liu, Jinyuan; Zhao, Nanjing; Rao, Zihe [Reprint author]

CORPORATE SOURCE: Laboratory of Structural Biology, School of Life Science and Engineering, Tsinghua University, Beijing, 100084, China

raozh@xtal.tsinghua.edu.cn

SOURCE: Acta Crystallographica Section D Biological Crystallography, (November, 2001) Vol. 57, No. 11, pp. 1729-1731. print.
ISSN: 0907-4449.

DOCUMENT TYPE: Article
LANGUAGE: English
ENTRY DATE: Entered STN: 12 Dec 2001
Last Updated on STN: 25 Feb 2002

AB Tabtoxin-resistance protein (TTR), an acetyltransferase from *Pseudomonas syringae* pv. *tabaci*, was overexpressed in *Escherichia coli* M15 and the TTR fusion protein complexed with acetyl-coenzyme A (AcCoA) was purified and crystallized. Diffraction data were collected to 3.0 ANG resolution in-house and the crystal was found to belong to space group P21, with unit-cell parameters a=47.6, b=66.6, c=53.5 ANG, beta=104.3degree. Furthermore, a selenomethionine (SeMet) TTR fusion protein derivative was overexpressed in the same expression system and its complex with AcCoA was purified in a reductive environment. The SeMet TTR derivative crystallized in two forms: the first was identical to

that observed for native crystals and the second belonged to space group C2, with unit-cell parameters $a=101.7$, $b=45.6$, $c=84.2$ ANG, $\beta=105.8$ degree. Data from the P21 crystal form were collected in-house to 2.3 ANG resolution. Subsequently, three different wavelength data sets of the C2 crystal form to 1.55 ANG resolution were collected at the Advanced Photon Source at Argonne National Laboratory.

L9 ANSWER 6 OF 20 BIOSIS COPYRIGHT (c) 2008 The Thomson Corporation on STN
ACCESSION NUMBER: 2001:393931 BIOSIS
DOCUMENT NUMBER: PREV200100393931
TITLE: Assessing tissue specific toxicity of chemopreventive agents in cultures from normal human tissues.
AUTHOR(S): Elmore, E. [Reprint author]; Luc, T.-T. [Reprint author]; Kelloff, G. J.; Steele, V. E.; Redpath, J. L. [Reprint author]
CORPORATE SOURCE: Department of Radiation Oncology, University of California Irvine, Irvine, CA, 92697, USA
elmore@uci.edu
SOURCE: In Vitro Cellular and Developmental Biology Animal, (March, 2001) Vol. 37, No. 3 Part 2, pp. 46.A. print.
Meeting Info.: Congress on In Vitro Biology. St. Louis, Missouri, USA. June 16-20, 2001. Society for In Vitro Biology.
ISSN: 1071-2690.
DOCUMENT TYPE: Conference; (Meeting)
Conference; Abstract; (Meeting Abstract)
Conference; (Meeting Poster)
LANGUAGE: English
ENTRY DATE: Entered STN: 15 Aug 2001
Last Updated on STN: 22 Feb 2002

L9 ANSWER 7 OF 20 BIOSIS COPYRIGHT (c) 2008 The Thomson Corporation on STN
ACCESSION NUMBER: 2000:202689 BIOSIS
DOCUMENT NUMBER: PREV200000202689
TITLE: Crystal structure of Escherichia coli malate synthase G complexed with magnesium and glyoxylate at 2.0 ANG resolution: Mechanistic implications.
AUTHOR(S): Howard, Bruce R.; Endrizzi, James A.; Remington, S. James [Reprint author]
CORPORATE SOURCE: Institute of Molecular Biology and Departments of Chemistry and Physics, University of Oregon, Eugene, OR, 97403, USA
SOURCE: Biochemistry, (March 21, 2000) Vol. 39, No. 11, pp. 3156-3168. print.
CODEN: BICHAW. ISSN: 0006-2960.
DOCUMENT TYPE: Article
LANGUAGE: English
ENTRY DATE: Entered STN: 24 May 2000
Last Updated on STN: 5 Jan 2002

AB The crystal structure of selenomethionine-substituted malate synthase G, an 81 kDa monomeric enzyme from Escherichia coli has been determined by MAD phasing, model building, and crystallographic refinement to a resolution of 2.0 ANG. The crystallographic R factor is 0.177 for 49242 reflections observed at the incident wavelength of 1.008 ANG, and the model stereochemistry is satisfactory. The basic fold of the enzyme is that of a beta8/alpha8 (TIM) barrel. The barrel is centrally located, with an N-terminal alpha-helical domain flanking one side. An inserted beta-sheet domain folds against the opposite side of the barrel, and an alpha-helical C-terminal domain forms a plug which caps the active site. Malate synthase catalyzes the condensation of glyoxylate and acetyl-coenzyme A and hydrolysis of the intermediate to yield malate and coenzyme A, requiring Mg²⁺. The structure reveals an

enzyme-substrate complex with glyoxylate and Mg²⁺ which coordinates the aldehyde and carboxylate functions of the substrate. Two strictly conserved residues, Asp631 and Arg338, are proposed to provide concerted acid-base chemistry for the generation of the enol(ate) intermediate of acetyl-coenzyme A, while main-chain hydrogen bonds and bound Mg²⁺ polarize glyoxylate in preparation for nucleophilic attack. The catalytic strategy of malate synthase appears to be essentially the same as that of citrate synthase, with the electrophile activated for nucleophilic attack by nearby positive charges and hydrogen bonds, while concerted acid-base catalysis accomplishes the abstraction of a proton from the methyl group of acetyl-coenzyme A. An active site aspartate is, however, the only common feature of these two enzymes, and the active sites of these enzymes are produced by quite different protein folds. Interesting similarities in the overall folds and modes of substrate recognition are discussed in comparisons of malate synthase with pyruvate kinase and pyruvate phosphate dikinase.

L9 ANSWER 8 OF 20 BIOSIS COPYRIGHT (c) 2008 The Thomson Corporation on STN
ACCESSION NUMBER: 1997:290834 BIOSIS
DOCUMENT NUMBER: PREV199799590037

TITLE: Chalcogen-analogs of amino acids. Their use in X-ray crystallographic and folding studies of peptides and proteins.
AUTHOR(S): Besse, Doerthe; Budisa, Nediljko; Karnbrock, Wilhelm;
Minks, Caroline; Musiol, Hans-Juergen; Pegeraro, Stefano;
Siedler, Frank; Weyher, Elisabeth; Moroder, Luis [Reprint author]
CORPORATE SOURCE: Max-Planck-Institut fuer Biochemie, Am Klopferspitz 18a,
D-82152 Martinsried, Germany
SOURCE: Biological Chemistry, (1997) Vol. 378, No. 3-4,
pp. 211-218.
ISSN: 1431-6730.
DOCUMENT TYPE: Article
General Review; (Literature Review)
LANGUAGE: English
ENTRY DATE: Entered STN: 9 Jul 1997
Last Updated on STN: 9 Jul 1997

AB Using methionine-auxotrophic Escherichia coli strains quantitative biosynthetic replacement of the methionine residues by seleno- and telluromethionine but not by methoxinine was achieved in various model proteins, clearly indicating a limited tolerance in the editing range of methionyl-tRNA synthetase. For expression of the protein variants the acetyl derivatives of the chalcogen-analogs of methionine, obtained by a new and highly efficient synthetic procedure, proved to be the ideal source in the growth media as they were found to be significantly more stable than the underivatized methionine analogs. The conformational properties in solution, the folding and unfolding parameters as well as X-ray crystallographic data confirmed the highly isomorphous character of the atomic mutants and thus the usefulness of this concept in X-ray analysis of proteins. Quantitative replacement of cysteine residues by selenocysteine has recently been achieved using cysteine-auxotrophic E. coli strains, but a selective replacement of cysteine residues by employing the natural translational machinery of selenocysteine is also conceivable. We have therefore performed a detailed study on synthetic selenocysteine-peptides in order to determine the redox potential of this cysteine analog, and thus the oxidability of related peptide and protein analogs to undergo the correct oxidative folding. Since the redox potential of selenocysteine was found to be significantly more reducing than that of the parent amino acid, selective formation of a diselenide bridge in presence of additional cysteine residues is highly favored as well documented in the case of the synthetic bis-selenocysteine-endothelin I analog. These results confirm that even

cysteine residues may represent an interesting target for the design and expression of isomorphous heteroatomic analogs of proteins.

L9 ANSWER 9 OF 20 BIOSIS COPYRIGHT (c) 2008 The Thomson Corporation on STN
ACCESSION NUMBER: 1983:297051 BIOSIS
DOCUMENT NUMBER: PREV198376054543; BA76:54543
TITLE: STIMULATION OF FIBRINOGEN BIOSYNTHESIS BY FIBRINOGEN
FRAGMENT D AND FRAGMENT E.
AUTHOR(S): BELL W R [Reprint author]; KESSLER C M; TOWNSEND R R
CORPORATE SOURCE: DEP MED, DIV HEMATOL, JOHNS HOPKINS UNIV SCH MED,
BALTIMORE, MD 21205, USA
SOURCE: British Journal of Haematology, (1983) Vol. 53,
No. 4, pp. 599-610.
CODEN: BJHEAL. ISSN: 0007-1048.
DOCUMENT TYPE: Article
FILE SEGMENT: BA
LANGUAGE: ENGLISH

AB Infusions of either fibrinogen fragment D or fibrinogen fragment E into rabbits were followed by increases in fibrinogen synthesis determined by the rate of incorporation of ^{75}Se -selenomethionine into circulating fibrinogen. The degree of stimulation was proportional to the amount of protein infused. When 4.5 mg of each fibrinogen fragment was administered separately to different groups of animals, fibrinogen fragment D was associated with a 4-fold increase in fibrinogen synthesis above that in the control animals compared with 1.5-fold increase induced by fragment E. Fragments D and E were assayed for bound sialic acid, the absence of which facilitates binding, transport and catabolism of many circulating glycoproteins by the liver. Fibrinogen fragment D contained 1.3% sialic acid compared to 1.4% in fragment E. Conservation of sialic acid during plasmic digestion of fibrinogen is indicated. The capacity of these glycopolyptide fragments to stimulate fibrinogen synthesis appears unrelated to the nearly identical quantities of N-acetyl neuraminic acid found in each fragment.

L9 ANSWER 10 OF 20 BIOSIS COPYRIGHT (c) 2008 The Thomson Corporation on STN
ACCESSION NUMBER: 1982:152843 BIOSIS
DOCUMENT NUMBER: PREV198273012827; BA73:12827
TITLE: FEEDBACK INHIBITION BY METHIONINE AND S ADENOSYL METHIONINE
AND DE SENSITIZATION OF HOMO SERINE O ACETYL
TRANSFERASE EC-2.3.1.31 IN BREVIBACTERIUM-FLAVUM.
AUTHOR(S): SHIOI I [Reprint author]; OZAKI H
CORPORATE SOURCE: CENTRAL RESEARCH LABORATORIES, AJINOMOTO CO, INC,
KAWASAKI-KU, KAWASAKI, KANAGAWA 210
SOURCE: Journal of Biochemistry (Tokyo), (1981) Vol. 89,
No. 5, pp. 1493-1500.
CODEN: JOBIAO. ISSN: 0021-924X.
DOCUMENT TYPE: Article
FILE SEGMENT: BA
LANGUAGE: ENGLISH

AB Homoserine O-acetyltransferase [EC 2.3.1.31] partially purified from *B. flavum* was specifically inhibited by the metabolic end products methionine and S-adenosylmethionine only when the enzymatic reaction was performed in the presence of cysteine or dithiothreitol, or after the preincubation of the enzyme with either of the SH compounds. p-Hydroxymercuribenzoate desensitizes the enzyme to inhibition. Concentrations of methionine and S-adenosylmethionine giving 50% inhibition were 4.8 and 0.26 mM, respectively, and 0.5 mM S-adenosylmethionine showed almost complete inhibition. No synergistic action by the 2 inhibitors was found. Optimum pH were 7.5 and 8.5 for the inhibition by methionine and S-adenosylmethionine, respectively. The inhibitions by the former and the latter were of mixed type and noncompetitive, respectively, with respect

to both substrates, homoserine and acetyl-CoA. Plots of the reaction rate against concentration of the inhibitors were sigmoidal, indicating the presence of cooperativity. N-Formylmethionine, α -methylmethionine, trifluoromethionine, selenomethionine, ethionine or S-adenosylhomocysteine inhibited the enzyme to almost the same extent as methionine or S-adenosylmethionine. The enzyme irreversibly lost sensitivity to inhibition during extraction or storage. Sensitivity was retained by the addition of cysteine, dithiothreitol, homoserine (substrate) or glycerol.

L9 ANSWER 11 OF 20 EMBASE COPYRIGHT (c) 2008 Elsevier B.V. All rights reserved on STN
ACCESSION NUMBER: 20022336382 EMBASE
TITLE: Peroxynitrite triggers a delayed resistance of coronary endothelial cells against ischemia-reperfusion injury.
AUTHOR: Laude K.; Thuillez C.; Richard V.
CORPORATE SOURCE: V. Richard, INSERM E9920, Faculte de Medecine, 22 Bd Gambetta, 76183 Rouen Cedex, France. Vincent.Richard@univ-rouen.fr
SOURCE: American Journal of Physiology - Heart and Circulatory Physiology, (Oct 2002) Vol. 283, No. 4 52-4, pp. H1418-H1423.
Refs: 27
ISSN: 0363-6135 CODEN: AJPPDI
COUNTRY: United States
DOCUMENT TYPE: Journal; Article
FILE SEGMENT: 018 Cardiovascular Diseases and Cardiovascular Surgery
002 Physiology
LANGUAGE: English
SUMMARY LANGUAGE: English
ENTRY DATE: Entered STN: 10 Oct 2002
Last Updated on STN: 10 Oct 2002
AB Experiments were designed to test whether nitric oxide (NO) and peroxynitrite trigger delayed coronary endothelial protection induced by preconditioning (PC) in rats. Prolonged ischemia reperfusion markedly reduced the response of isolated coronary arteries to acetylcholine, and this was prevented by PC performed 24 h earlier. The NO synthase (NOS) inhibitor N(G)-nitro-L-arginine methyl ester (L-NAME) administered during PC abolished its delayed endothelial protective effect, whereas the inducible NOS inhibitor N-(3(aminomethyl)benzyl)acetaminide had no effect. Delayed endothelial PC was also abolished by the peroxynitrite scavengers selenomethionine or uric acid given during PC. In parallel, the NO/peroxynitrite donor S-morpholinosyndnonimine and authentic peroxynitrite, administered 24 h before prolonged ischemia-reperfusion mimicked endothelial PC, whereas the NO donor S-nitroso-N-acetylpenicillamine had no effect. This suggests that peroxynitrite is an essential trigger of the delayed coronary endothelial protection induced by PC in rat hearts.

L9 ANSWER 12 OF 20 EMBASE COPYRIGHT (c) 2008 Elsevier B.V. All rights reserved on STN
ACCESSION NUMBER: 2002075160 EMBASE
TITLE: Redox regulation of cytosolic glycerol-3-phosphate dehydrogenase: Cys(102) is the target of the redox control and essential for the catalytic activity.
AUTHOR: Kim J.-Y.; Park H.-S.; Kang S.I.; Choi E.-J.; Kim I.Y.
CORPORATE SOURCE: I.Y. Kim, Laboratory of Cellular Biochemistry, Graduate School of Biotechnology, Korea University, 1-5 Anam-dong, Sungbuk-ku, Seoul 136-701, Korea, Republic of. ickkim@korea.ac.kr
SOURCE: Biochimica et Biophysica Acta - General Subjects, (15 Jan 2002) Vol. 1569, No. 1-3, pp. 67-74.

Refs: 54
ISSN: 0304-4165 CODEN: BBGSB3
PUBLISHER IDENT.: S 0304-4165(01)00236-7
COUNTRY: Netherlands
DOCUMENT TYPE: Journal; Article
FILE SEGMENT: 037 Drug Literature Index
LANGUAGE: English
SUMMARY LANGUAGE: English
ENTRY DATE: Entered STN: 7 Mar 2002
Last Updated on STN: 7 Mar 2002

AB Cytosolic glycerol-3-phosphate dehydrogenase (cG3PDH) occupies the branch point between the glycolytic pathway and triglyceride biosynthesis. However, the regulatory mechanism of the cG3PDH activity has remained obscure. Here we report that cG3PDH is efficiently inhibited by modification of the thiol group through a redox mechanism. In this study, we found that sodium selenite and nitric oxide (NO) donors such as S-nitroso-N-acetylpenicillamine and 3-morpholinosydnonimine inhibited cG3PDH activity, and that similar effects could be achieved with selenium metabolites such as selenocysteine and selenomethionine. Furthermore, we found that reducing agents, such as dithiothreitol and β -mercaptoethanol, restored the cG3PDH activity suppressed by selenite and NO both *in vitro* and in cultured cells. Buthionine sulfoximine depleted levels of both reduced glutathione and the oxidized form but had no effect on the suppression of cG3PDH activity by selenite in cultured cells. Moreover, thiol-reactive agents, such as N-ethylmaleimide and o-iodosobenzoic acid, blocked the enzyme activity of cG3PDH through the modification of redox-sensitive cysteine residues in cG3PDH. The inhibitor of NO synthase, L-N(G)-nitro-arginine, restored the cG3PDH activity inhibited by NO in cultured cells, whereas the inhibitor of guanylyl cyclase, 1H-[1,2,4] oxadiazole[4,3-a] quinoxalin-1-one (ODQ), has no effect. NO directly inhibits cG3PDH activity not via a cGMP-dependent mechanism. Finally, using site-directed mutagenesis, we found that Cys(102) of cG3PDH was sensitive to both selenite and NO. From the results, we suggest that cG3PDH is a target of cellular redox regulation. .COPYRGT. 2002 Elsevier Science B.V. All rights reserved.

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ACCESSION NUMBER: 2001100222 EMBASE
TITLE: Stimulation of megakaryocytopoiesis and platelet production during growth of an experimental lymphoma.
AUTHOR: Ray M.R.
CORPORATE SOURCE: Dr. M.R. Ray, Experimental Hematology Unit, Chittaranjan Natl. Cancer Institute, 37, S.P. Mukherjee Road, Calcutta-700 026, India. cncinst@giascl01.vsnl.net.in
SOURCE: Journal of Experimental and Clinical Cancer Research, (2000) Vol. 19, No. 4, pp. 505-511.
Refs: 34
ISSN: 0392-9078 CODEN: JECRDN
COUNTRY: Italy
DOCUMENT TYPE: Journal; Article
FILE SEGMENT: 016 Cancer
025 Hematology
LANGUAGE: English
SUMMARY LANGUAGE: English
ENTRY DATE: Entered STN: 29 Mar 2001
Last Updated on STN: 29 Mar 2001

AB The effect of malignant tumor growth on host's megakaryocytopoiesis and platelet production was studied in mice bearing transplantable Dalton's lymphoma. Tumor growth was paralleled by thrombocytosis, neutrophilia, and anemia. Platelet (⁵¹Cr half-life was normal but incorporation of (75)Selenomethionine into circulating platelets was

significantly enhanced in the tumor bearers suggesting stimulated thrombopoiesis while platelet life span remained unchanged. Megakaryocytes and their precursors, the small acetyl cholinesterase positive cells, were found in increased numbers in the bone marrow (BM) and particularly in the spleen where five to eight-fold rise was observed at the log phase of tumor growth. In addition, a remarkable increase in the number of megakaryocyte progenitors (CFU-MK and MK CFU-S) was observed both in the BM and spleen. Stimulation of these progenitors was more pronounced in the spleen than in the marrow, and the change was noticeable even from the third day of tumor bearing. Therefore, the results suggest that thrombocytosis associated with the growth of this experimental lymphoma was due to accelerated platelet production following stimulated megakaryocytopoiesis especially in the spleen.

L9 ANSWER 14 OF 20 EMBASE COPYRIGHT (c) 2008 Elsevier B.V. All rights reserved on STN

ACCESSION NUMBER: 1985089356 EMBASE
TITLE: Incorporation and distribution of selenium into thiolase from *Clostridium kluyveri*.
AUTHOR: Sliwkowski M.X.; Stadtman T.C.
CORPORATE SOURCE: Laboratory of Biochemistry, National Heart, Lung, and Blood Institute, National Institutes of Health, Bethesda, MD 20205, United States
SOURCE: Journal of Biological Chemistry, (1985) Vol. 260, No. 5, pp. 3140-3144.
COUNTRY: ISSN: 0021-9258 CODEN: JBCHA3
DOCUMENT TYPE: United States
FILE SEGMENT: Journal; Article
004 Microbiology: Bacteriology, Mycology, Parasitology and Virology
LANGUAGE: English
ENTRY DATE: Entered STN: 10 Dec 1991
Last Updated on STN: 10 Dec 1991

AB *Clostridium kluyveri* incorporates selenium as selenomethionine into its acetoacetyl-CoA thiolase when grown in media containing normal sulfur-to-selenium ratios. Antibodies raised against the purified enzyme permitted quantitative immunoprecipitation of thiolase from crude cell extracts and thus facilitated the systematic analysis of the effects of wide variation in sulfur-to-selenium ratios on selenium incorporation into the enzyme. The extent of incorporation of selenium into thiolase was found to be dependent on the form of selenium supplied. When [(75)Se] selenomethionine was the source of selenium, the incorporation of selenium into thiolase was inversely proportional to the level of added methionine. However, similar levels of methionine failed to decrease the incorporation of selenium from selenite. To study the location of selenomethionine and methionine residues in the polypeptide chain of the enzyme, thiolase was prepared from cells cultured in the presence of H(2) (35)SO(4) or Na(2) (75)SeO(3). The (35)S- or (75)Se-labeled protein was treated with trypsin and the resulting peptides were isolated by reverse phase high performance liquid chromatography. The peptide maps of the enzyme indicated that selenium was distributed throughout the primary structure in a manner that paralleled methionine. From these studies, it is concluded that selenium occurs in thiolase adventitiously and is not required for any biological function.

L9 ANSWER 15 OF 20 EMBASE COPYRIGHT (c) 2008 Elsevier B.V. All rights reserved on STN

ACCESSION NUMBER: 1982252140 EMBASE
TITLE: Isolation of a selenium-containing thiolase from *Clostridium kluyveri*: Identification of the selenium moiety as selenomethionine.
AUTHOR: Hartmanis M.G.N.; Stadtman T.C.

CORPORATE SOURCE: Lab. Biochem., Natl. Heart Lung Blood Inst., NIH, Bethesda, MD 20205, United States
SOURCE: Proceedings of the National Academy of Sciences of the United States of America, (1982) Vol. 79, No. 16 I, pp. 4912-4916.
ISSN: 0027-8424 CODEN: PNASA6
COUNTRY: United States
DOCUMENT TYPE: Journal; Article
FILE SEGMENT: 022 Human Genetics
004 Microbiology: Bacteriology, Mycology, Parasitology and Virology
LANGUAGE: English
ENTRY DATE: Entered STN: 9 Dec 1991
Last Updated on STN: 9 Dec 1991

L9 ANSWER 16 OF 20 MEDLINE on STN
ACCESSION NUMBER: 2003564160 MEDLINE
DOCUMENT NUMBER: PubMed ID: 14646106
TITLE: Crystallization and preliminary X-ray analysis of N-acetyl-l-D-myo-inositol-2-deoxy-alpha-D-glucopyranoside deacetylase (MshB) from *Mycobacterium tuberculosis*.

AUTHOR: McCarthy Andrew A; Knijff Rainer; Peterson Neil A; Baker Edward N
COPORATE SOURCE: School of Biological Sciences, University of Auckland, Auckland, New Zealand.
SOURCE: Acta crystallographica. Section D, Biological crystallography, (2003 Dec) Vol. 59, No. Pt 12, pp. 2316-8. Electronic Publication: 2003-11-27. Journal code: 9305878. ISSN: 0907-4449.

PUB. COUNTRY: Denmark
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
(RESEARCH SUPPORT, NON-U.S. GOV'T)

LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 200408
ENTRY DATE: Entered STN: 16 Dec 2003
Last Updated on STN: 11 Aug 2004
Entered Medline: 10 Aug 2004

AB *Mycobacteria* synthesize mycothiol (MSH) as a low-molecular-weight thiol that protects against oxidative stress in a similar role to that of glutathione in many other species. The absence of MSH in mammals suggests that enzymes from its biosynthetic pathway in *Mycobacterium tuberculosis* could be useful targets for drug design. The gene for MshB (Rv1170), the enzyme that catalyses the second step in MSH biosynthesis in *M. tuberculosis*, has been cloned and the protein has been expressed in *Escherichia coli* both in native and SeMet-substituted forms and crystallized in two crystal forms. One of these, prepared in the presence of beta-octylglucoside as a key additive, is suitable for high-resolution X-ray structural analysis. The crystals are orthorhombic, with unit-cell parameters $a = 71.69$, $b = 83.74$, $c = 95.65$ Å, space group P2(1)2(1)2(1) and two molecules in the asymmetric unit. X-ray diffraction data to 1.9 Å resolution have been collected.

L9 ANSWER 17 OF 20 MEDLINE on STN
ACCESSION NUMBER: 2003021009 MEDLINE
DOCUMENT NUMBER: PubMed ID: 12527305
TITLE: Crystal structure of tabtoxin resistance protein complexed with acetyl coenzyme A reveals the mechanism for beta-lactam acetylation.
AUTHOR: He Hongzhen; Ding Yi; Bartlam Mark; Sun Fei; Le Yi; Qin Xincheng; Tang Hong; Zhang Rongguang; Joachimiak Andrzej;

CORPORATE SOURCE: Liu Jinyuan; Zhao Nanming; Rao Zihe
Laboratory of Structural Biology, and MOE Laboratory of
Protein Science, School of Life Sciences and Engineering,
Tsinghua University, 100084, Beijing, People's Republic of
China.

SOURCE: Journal of molecular biology, (2003 Jan 31) Vol.
325, No. 5, pp. 1019-30.
Journal code: 2985088R. ISSN: 0022-2836.

PUB. COUNTRY: England: United Kingdom

DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
(RESEARCH SUPPORT, NON-U.S. GOV'T)
(RESEARCH SUPPORT, U.S. GOV'T, NON-P.H.S.)

LANGUAGE: English

FILE SEGMENT: Priority Journals

OTHER SOURCE: PDB-1GHE

ENTRY MONTH: 200302

ENTRY DATE: Entered STN: 16 Jan 2003
Last Updated on STN: 25 Feb 2003
Entered Medline: 24 Feb 2003

AB Tabtoxin resistance protein (TTR) is an enzyme that renders tabtoxin-producing pathogens, such as *Pseudomonas syringae*, tolerant to their own phytotoxins. Here, we report the crystal structure of TTR complexed with its natural cofactor, acetyl coenzyme A (AcCoA), to 1.55 Å resolution. The binary complex forms a characteristic "V" shape for substrate binding and contains the four motifs conserved in the GCN5-related N-acetyltransferase (GNAT) superfamily, which also includes the histone acetyltransferases (HATs). A single-step mechanism is proposed to explain the function of three conserved residues, Glu92, Asp130 and Tyr141, in catalyzing the acetyl group transfer to its substrate. We also report that TTR possesses HAT activity and suggest an evolutionary relationship between TTR and other GNAT members.

L9 ANSWER 18 OF 20 MEDLINE on STN
ACCESSION NUMBER: 2000200101 MEDLINE
DOCUMENT NUMBER: PubMed ID: 10733911
TITLE: Expression, purification, and crystallization of the *Escherichia coli* selenomethionyl beta-ketoacyl-acyl carrier protein synthase III.

AUTHOR: Khandekar S S; Konstantinidis A K; Silverman C; Janson C A;
McNulty D E; Nwaguwu S; Van Aller G S; Doyle M L; Kane J F;
Qiu X; Lonsdale J

CORPORATE SOURCE: Department of Protein Biochemistry, SmithKline Beecham
Pharmaceuticals, King of Prussia, Pennsylvania 19406, USA..
Sanjay_Khandekar-1@sbphrd.com

SOURCE: Biochemical and biophysical research communications,
(2000 Apr 2) Vol. 270, No. 1, pp. 100-7.
Journal code: 0372516. ISSN: 0006-291X.

PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)

LANGUAGE: English

FILE SEGMENT: Priority Journals

ENTRY MONTH: 200005

ENTRY DATE: Entered STN: 12 May 2000
Last Updated on STN: 12 May 2000
Entered Medline: 4 May 2000

AB Bacterial beta-ketoacyl-acyl carrier protein (ACP) synthase III (KAS III, also called FabH) catalyzes the condensation and transacylation of acetyl-CoA with malonyl-ACP. In order to understand the mode of enzyme/substrate interaction and design small molecule inhibitors, we have expressed, purified, and crystallized a selenomethionyl-derivative of *E. coli* KAS III. Several lines of evidence confirmed that purified selenomethionyl KAS III was homogenous, stably folded, and enzymatically

active. Dynamic light scattering, size exclusion chromatography, and mass spectrometry results indicated that selenomethionyl KAS III is a noncovalent homodimer. Diffraction quality crystals of selenomethionyl KAS III/acetyl-CoA complex, which grew overnight to a size of 0.2 mm(3), belonged to the tetragonal space group P4(1)2(1)2.
Copyright 2000 Academic Press.

L9 ANSWER 19 OF 20 MEDLINE on STN
ACCESSION NUMBER: 85060502 MEDLINE
DOCUMENT NUMBER: PubMed ID: 6150419
TITLE: Characterization of selenomethionine in proteins.
AUTHOR: Sliwkowski M X
SOURCE: Methods in enzymology, (1984) Vol. 107, pp. 620-3.
Journal code: 0212271. ISSN: 0076-6879.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 198412
ENTRY DATE: Entered STN: 20 Mar 1990
Last Updated on STN: 6 Feb 1998
Entered Medline: 26 Dec 1984

L9 ANSWER 20 OF 20 MEDLINE on STN
ACCESSION NUMBER: 77020487 MEDLINE
DOCUMENT NUMBER: PubMed ID: 970934
TITLE: Methionine overproduction by *Saccharomyces lipolytica*.
AUTHOR: Morzycka E; Sawnor-Korszynska D; Paszewski A; Grabski J;
Raczynska-Bojanowska K
SOURCE: Applied and environmental microbiology, (1976 Jul)
Vol. 32, No. 1, pp. 125-30.
Journal code: 7605801. ISSN: 0099-2240.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 197612
ENTRY DATE: Entered STN: 13 Mar 1990
Last Updated on STN: 29 Jan 1999
Entered Medline: 1 Dec 1976

AB Six ethionine-resistant (Etr) regulatory mutants of *Saccharomyces lipolytica* S1/1 overproducing methionine have been isolated. Five of them are also resistant to seleno-methionine. The activity of homocysteine synthase (O-acetyl-L-homoserine-acetate lyase, adding hydrogen sulfide) is derepressed in these mutants and is not susceptible to the methionine-mediated repression. The pool of free methionine in Etr mutants is enhanced 1.5 to 18 times, and incorporation of 35S into methionine is 1.5 to 50 times higher than that in the wild strain. Neither accumulation of endogenous free methionine in Etr mutants nor the uptake of exogenous methionine is accompanied by an increase in the S-adenosylmethionine pool. This implies compartmentation of methionine metabolism in *S. lipolytica*.

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|------------|---------|
| ENTRY | SESSION |
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CA SUBSCRIBER PRICE ENTRY SESSION

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NEWS 2 OCT 02 CA/Cplus enhanced with pre-1907 records from Chemisches Zentralblatt
NEWS 3 OCT 19 BEILSTEIN updated with new compounds
NEWS 4 NOV 15 Derwent Indian patent publication number format enhanced
NEWS 5 NOV 19 WPIX enhanced with XML display format
NEWS 6 NOV 30 ICSD reloaded with enhancements
NEWS 7 DEC 04 LINPACDOCDB now available on STN
NEWS 8 DEC 14 BEILSTEIN pricing structure to change
NEWS 9 DEC 17 USPATOLD added to additional database clusters
NEWS 10 DEC 17 IMSDRUGCONF removed from database clusters and STN
NEWS 11 DEC 17 DGENE now includes more than 10 million sequences
NEWS 12 DEC 17 TOXCENTER enhanced with 2008 MeSH vocabulary in MEDLINE segment
NEWS 13 DEC 17 MEDLINE and LMEDLINE updated with 2008 MeSH vocabulary
NEWS 14 DEC 17 CA/Cplus enhanced with new custom IPC display formats
NEWS 15 DEC 17 STN Viewer enhanced with full-text patent content from USPATOLD
NEWS 16 JAN 02 STN pricing information for 2008 now available
NEWS 17 JAN 16 CAS patent coverage enhanced to include exemplified prophetic substances
NEWS 18 JAN 28 USPATFULL, USPAT2, and USPATOLD enhanced with new custom IPC display formats
NEWS 19 JAN 28 MARPAT searching enhanced
NEWS 20 JAN 28 USGENE now provides USPTO sequence data within 3 days of publication
NEWS 21 JAN 28 TOXCENTER enhanced with reloaded MEDLINE segment
NEWS 22 JAN 28 MEDLINE and LMEDLINE reloaded with enhancements
NEWS 23 FEB 08 STN Express, Version 8.3, now available
NEWS 24 FEB 20 PCI now available as a replacement to DPCI
NEWS 25 FEB 25 IFIREF reloaded with enhancements
NEWS 26 FEB 25 IMSPRODUCT reloaded with enhancements
NEWS 27 FEB 29 WPINDEX/WPIDS/WPIX enhanced with ECLA and current U.S. National Patent Classification

NEWS EXPRESS FEBRUARY 08 CURRENT WINDOWS VERSION IS V8.3,
AND CURRENT DISCOVER FILE IS DATED 20 FEBRUARY 2008

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PASSWORD:

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FILE 'HOME' ENTERED AT 10:12:36 ON 04 MAR 2008

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ENTRY SESSION
FEE ESTIMATED COST 0 21 0 21

112

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Switching to the Registry File

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| FULL ESTIMATED COST | 0.21 | 0.21 |

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DICTIONARY FILE UPDATES: 3 MAR 2008 HIGHEST RN 1006431-93-1

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chain nodes :
1 2 3 4 5 6 7 8 9 10 11 12
chain bonds :
1-2 2-3 3-4 4-5 5-6 5-10 6-7 7-8 7-9 10-11 10-12
exact/norm bonds :
1-2 2-3 5-6 6-7 7-9
exact bonds :
3-4 4-5 5-10 7-8
normalized bonds :
10-11 10-12

Match level :
1:CLASS 2:CLASS 3:CLASS 4:CLASS 5:CLASS 6:CLASS 7:CLASS 8:CLASS 9:CLASS
10:CLASS 11:CLASS 12:CLASS
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L1 STRUCTURE UPLOADED

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FULL SEARCH INITIATED 10:13:07 FILE 'REGISTRY'
FULL SCREEN SEARCH COMPLETED -                  22 TO ITERATE
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100.0% PROCESSED                  22 ITERATIONS                  2 ANSWERS
SEARCH TIME: 00.00.01
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L2 2 SEA FAM FUL L1

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=> d 12 1-2
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L2        ANSWER 1 OF 2 REGISTRY COPYRIGHT 2008 ACS on STN
RN        210910-25-1 REGISTRY
ED        Entered STN: 06 Sep 1998
CN        Butanoic acid, 2-(acetylamino)-4-(methylseleno)-, (2S)- (CA INDEX NAME)
FS        STEREOSEARCH
```

MF C7 H13 N O3 Se
SR CA
LC STN Files: CA, CAPLUS, CHEMCATS, TOXCENTER, USPATFULL

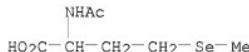
Absolute stereochemistry.



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3 REFERENCES IN FILE CA (1907 TO DATE)
3 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L2 ANSWER 2 OF 2 REGISTRY COPYRIGHT 2008 ACS on STN
RN 174463-50-4 REGISTRY
ED Entered STN: 22 Mar 1996
CN Butanoic acid, 2-(acetylamino)-4-(methylseleno)- (CA INDEX NAME)
MF C7 H13 N O3 Se
SR CA
LC STN Files: CA, CAPLUS, CASREACT, CHEMCATS



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

2 REFERENCES IN FILE CA (1907 TO DATE)
2 REFERENCES IN FILE CAPLUS (1907 TO DATE)

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accessing the remaining file names entered.

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|----------------------|-------------|---------------|
| FULL ESTIMATED COST | 74.11 | 74.32 |

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=> s 12
L3 5 L2
=> d 13 ibib abs 1-5

L3 ANSWER 1 OF 5 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 2005114419 CAPLUS
DOCUMENT NUMBER: 142:114471
TITLE: Preparation of glycosylated amino acids, proteins and peptides via olefin metathesis reactions
INVENTOR(S): Davis, Benjamin Guy; Kramer, Holger Bernd Ralf
PATENT ASSIGNEE(S): Isis Innovation Limited, UK
SOURCE: PCT Int. Appl., 48 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|------|----------|-----------------|----------|
| WO 2005000873 | A1 | 20050106 | WO 2004-GB2738 | 20040624 |
| W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW | | | | |
| RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG | | | | |

PRIORITY APPLN. INFO.: GB 2003-14741 A 20030624
AB A method for the preparation of a glycosylated amino acid, protein or peptide comprises reacting an unprotected carbohydrate containing a carbon-carbon double bond (e.g., an allyl or vinyl C-glycoside) with an amino acid, a protein or a peptide containing a side-chain carbon-carbon double bond under olefin metathesis reaction conditions. The side-chain carbon-carbon double bond is introduced by (a) oxidizing the sulfur in methionine or the selenium in selenomethione or homoselenocysteine and (b) eliminating the sulfoxide or selenoxide. Thus, 3-(α -D-glucopyranosyl)propene, prepared by pivaloylation-allylation of glucose, was reacted with vinylglycine (vG) tripeptide Ac-vG-Ser-Phe-OMe in the presence of Grubbs-Hoveyda catalyst to afford the desired cross-metathesis product in mixture with the C-glycoside homodimer byproduct.

REFERENCE COUNT: 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L3 ANSWER 2 OF 5 CAPLUS COPYRIGHT 2008 ACS on STN
 ACCESSION NUMBER: 2004:467738 CAPLUS
 DOCUMENT NUMBER: 141:17591
 TITLE: Agent having a destructive effect on malignant tumors and method for the production
 INVENTOR(S): Groke, Karl; Herwig, Ralf
 PATENT ASSIGNEE(S): C.Y.L. Handelsges. m.b.H., Austria; Ferdinand, Peter
 SOURCE: PCT Int. Appl., 35 pp.
 CODEN: PIXXD2
 DOCUMENT TYPE: Patent
 LANGUAGE: German
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|------|-----------------|-----------------|----------|
| WO 2004047832 | A1 | 20040610 | WO 2003-EP50712 | 20031013 |
| W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW | | | | |
| RW: GH, GM, KE, LS, MM, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG | | | | |
| AT 2002001778 | A | 20040815 | AT 2002-1778 | 20021127 |
| AT 412447 | B | 20050325 | | |
| CA 2507273 | A1 | 20040610 | CA 2003-2507273 | 20031013 |
| AU 2003285351 | A1 | 20040618 | AU 2003-285351 | 20031013 |
| EP 1565176 | A1 | 20050824 | EP 2003-778338 | 20031013 |
| EP 1565176 | B1 | 20060524 | | |
| R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK | | | | |
| JP 2006508998 | T | 20060316 | JP 2004-554531 | 20031013 |
| AT 326958 | T | 20060615 | AT 2003-778338 | 20031013 |
| PT 1565176 | T | 20061031 | PT 2003-778338 | 20031013 |
| ES 2268452 | T3 | 20070316 | ES 2003-778338 | 20031013 |
| US 2006292218 | A1 | 20061228 | US 2006-536777 | 20060907 |
| PRIORITY APPLN. INFO.: | | | | |
| | | AT 2002-1778 | A | 20021127 |
| | | EP 2003-778338 | A | 20031013 |
| | | WO 2003-EP50712 | W | 20031013 |

AB Disclosed is an agent which has a destructive effect on malignant tumors and contains alpha-ketoglutaric acid, N-acetyl-seleno-L-methionine, N-acetyl-L-methionine, and a compound that is capable of forming azomethine and is selected among the group 5-hydroxymethylfurfural, dehydroascorbic acid, maltol, and vanillin as an active substance, 5-hydroxymethylfurfural being preferred. The inventive agent can be used in the form of an infusion, in an oral or rectal form of administration, or as an irrigation in cancer therapy. The treatment of cancer patients with the following infusion solution is reported: α -ketoglutaric acid 9.0 g/L; 5-hydroxymethyl furfural 3.0 g/L; N-acetyl-seleno-L-methionine 2.0 mg/L; N-acetyl-L-methionine 100.00 mg/L; glucose 30.0 g/L; sodium and potassium ions to set pH.

REFERENCE COUNT: 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L3 ANSWER 3 OF 5 CAPLUS COPYRIGHT 2008 ACS on STN
 ACCESSION NUMBER: 1998:485713 CAPLUS
 DOCUMENT NUMBER: 129:146163

TITLE: Acylase I-catalyzed deacetylation of N-acetyl-L-cysteine and S-alkyl-N-acetyl-L-cysteines
AUTHOR(S): Uttamsingh, Vinita; Keller, D. A.; Anders, M. W.
CORPORATE SOURCE: Department of Pharmacology and Physiology, University of Rochester, Rochester, NY, 14642, USA
SOURCE: Chemical Research in Toxicology (1998), 11(7), 800-809
CODEN: CTOEC; ISSN: 0893-228X
PUBLISHER: American Chemical Society
DOCUMENT TYPE: Journal
LANGUAGE: English
AB The aminoacylase that catalyzes the hydrolysis of N-acetyl-L-cysteine (NAC) was identified as acylase I after purification by column chromatog. and electrophoretic anal. Rat kidney cytosol was fractionated by ammonium sulfate precipitation, and the proteins were separated by ion-exchange column chromatog., gel-filtration column chromatog., and hydrophobic interaction column chromatog. Acylase activity with NAC and N-acetyl-L-methionine (NAM), a known substrate for acylase I, as substrates coeluted during all chromatog. steps. Sodium dodecyl sulfate-polyacrylamide gel electrophoresis showed that the protein was purified to near homogeneity and had a subunit Mr of 43 000, which is identical with the Mr of acylase I from porcine kidney and bovine liver. N-Butylmalonic acid was a slow-binding inhibitor of acylase I and inhibited the deacetylation of NAC with a Ki of 192 ± 27 μ M. These results show that acylase I catalyzes the deacetylation of NAC. The acylase I-catalyzed deacetylation of a range of S-alkyl-N-acetyl-L-cysteines, their carbon and oxygen analogs, and the selenium analog of NAM was also studied with porcine kidney acylase I. The specific activity of the acylase I-catalyzed deacetylation of these substrates was related to their calculated molar volumes and log P values. The S-alkyl-N-acetyl-L-cysteines with short (C0-C3) and unbranched S-alkyl substituents were good acylase I substrates, whereas the S-alkyl-N-acetyl-L-cysteines with long (>C3) and branched S-alkyl substituents were poor acylase I substrates. The carbon and oxygen analogs of S-methyl-N-acetyl-L-cysteine and the carbon analog of S-ethyl-N-acetyl-L-cysteine were poor acylase I substrates, whereas the selenium analog of NAM was a good acylase I substrate.
REFERENCE COUNT: 50 THERE ARE 50 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L3 ANSWER 4 OF 5 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 1997:722992 CAPLUS
DOCUMENT NUMBER: 127:331721
TITLE: L-methionine related L-amino acids by acylase cleavage of their corresponding N-acetyl-DL-derivatives
AUTHOR(S): Bommarius, Andreas S.; Drauz, Karlheinz; Gunther, Kurt; Knaup, Gunter; Schwarm, Michael
CORPORATE SOURCE: Degussa AG, Specialty Chemicals, R and D Fine Chemicals, Hanau, D-63403, Germany
SOURCE: Tetrahedron: Asymmetry (1997), 8(19), 3197-3200
CODEN: TASYE3; ISSN: 0957-4166
PUBLISHER: Elsevier
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 127:331721
AB Acylase I from *Aspergillus oryzae* is an even more useful enzyme than suggested so far. Besides standard amino acids such as L-Met, L-Val and L-Phe, a number of addnl. sulfur- and selenium-containing amino acids can be obtained at useful reaction rates and in very high enantiomeric purity by kinetic resolution of the resp. N-acetyl-DL-amino acids.
REFERENCE COUNT: 19 THERE ARE 19 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L3 ANSWER 5 OF 5 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1996:30201 CAPLUS
DOCUMENT NUMBER: 124:203067
TITLE: A New Efficient Synthesis of Acetyltelluro- and
Acetylselenomethionine and Their Use in the
Biosynthesis of Heavy-Atom Protein Analogs
AUTHOR(S): Kurnbrock, Wilhelm; Weyher, Elisabeth; Budisa,
Nediljko; Huber, Robert; Moroder, Luis
CORPORATE SOURCE: Max-Planck-Institut fuer Biochemie, Martinsried,
82152, Germany
SOURCE: Journal of the American Chemical Society (1996),
118(4), 913-14
CODEN: JACSAT; ISSN: 0002-7863
PUBLISHER: American Chemical Society
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 124:203067
AB N-Acetyl-DL-telluromethionine and N-acetyl-DL-selenomethionine were
obtained in good yields upon reaction of racemic 2-
(acetylamino)butyrolactone with MeTeLi and MeSeLi, resp., and their
enantioselective hydrolysis with aminoacylase generated the related
L-amino acids. The biosynthesis of all-Met(Te)- and all-Met(Se)-annexin V
with the racemic acetyl derivs. was as efficient, if not better than the
use of the related L-amino acids.

| => file registry | SINCE FILE | TOTAL |
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| FULL ESTIMATED COST | 15.51 | 89.83 |
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| CA SUBSCRIBER PRICE | ENTRY | SESSION |
| | -4.00 | -4.00 |

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chain bonds :
1-2 2-3 3-4 4-5 5-6 5-10 6-7 7-8 7-9 10-11 10-12
exact/norm bonds :
1-2 2-3 5-6 6-7 7-9
exact bonds :
3-4 4-5 5-10 7-8
normalized bonds :
10-11 10-12

Match level :
1:CLASS 2:CLASS 3:CLASS 4:CLASS 5:CLASS 6:CLASS 7:CLASS 8:CLASS 9:CLASS
10:CLASS 11:CLASS 12:CLASS

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L4 STRUCTURE UPLOADED

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FULL SCREEN SEARCH COMPLETED -        5099 TO ITERATE

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100.0% PROCESSED        5099 ITERATIONS                          67 ANSWERS
SEARCH TIME: 00.00.01

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=> s 15
L6 764 L5

=> s 16 and (cancer or tumor or neoplasm)
349704 CANCER
51418 CANCERS
362693 CANCER
(CANCER OR CANCERS)
442394 TUMOR
166398 TUMORS
493838 TUMOR
(TUMOR OR TUMORS)
485178 NEOPLASM
37030 NEOPLASMS
502087 NEOPLASM
(NEOPLASM OR NEOPLASMS)
L7 26 L6 AND (CANCER OR TUMOR OR NEOPLASM)

=> d 17 ibib abs 1-26

L7 ANSWER 1 OF 26 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 2005:961905 CAPLUS
DOCUMENT NUMBER: 143:260403
TITLE: Protein kinase inhibitors and methods for identifying
same
INVENTOR(S): Lawrence, David S.
PATENT ASSIGNEE(S): Albert Einstein College of Medicine of Yeshiva
University, USA
SOURCE: PCT Int. Appl., 116 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|------|----------|-----------------|------------|
| WO 2005079300 | A2 | 20050901 | WO 2005-US4410 | 20050214 |
| W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH,
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GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC,
LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI,
NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY,
TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW,
RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM,
AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK,
EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT,
RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML,
MR, NE, SN, TD, TG | | | | |
| US 2007254312 | A1 | 20071101 | US 2007-589029 | 20070621 |
| PRIORITY APPLN. INFO.: | | | US 2004-544376P | P 20040213 |
| | | | WO 2005-US4410 | W 20050214 |

OTHER SOURCE(S): MARPAT 143:260403
AB Inhibitors of protein kinase C (PKC) α , PKC δ and PKC ζ are provided which are selective for those PKC isotypes. Combinatorial libraries for identifying protein kinases are also provided, as are methods of identifying protein kinases using those libraries. Addnl., methods of treating a mammal having a deleterious condition, where the condition is dependent on a protein kinase for induction or severity, are provided. Methods of inhibiting protein kinases are also provided.

L7 ANSWER 2 OF 26 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 2005:540462 CAPLUS

DOCUMENT NUMBER: 143:83454

TITLE: Enlargement of mucocutaneous or cutaneous organs and sites with topical compositions containing N-acyl-aldosamine or N-acylamino acid compounds

INVENTOR(S): Yu, Ruey J.; Van Scott, Eugene J.
USA

PATENT ASSIGNEE(S): PCT Int. Appl., 52 pp.

SOURCE: CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|------------------------|---|----------|-----------------|------------|
| WO 2005055947 | A2 | 20050623 | WO 2004-US41009 | 20041208 |
| WO 2005055947 | A3 | 20040825 | | |
| W: | AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH,
CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD,
GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC,
LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI,
NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY,
TJ, TM, TN, TR, TT, TZ, UA, US, UZ, VC, VN, YU, ZA, ZM, ZW | | | |
| RW: | BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW,
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RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML,
MR, NE, SN, TD, TG | | | |
| US 2005171194 | A1 | 20050804 | US 2004-6822 | 20041208 |
| PRIORITY APPLN. INFO.: | | | US 2003-527307P | P 20031208 |
| | | | US 2004-570895P | P 20040514 |

AB Compns. comprising a hydroxycarboxylic acid, N-acyl-aldosamine, N-acylamino acid or related compound on topical application are beneficial to plump and pout lips, enhance and firm eyelids, enlarge and augment breasts, elongate and expand penis. Because of antioxidant property, certain hydroxycarboxylic acids, N-acyl-aldosamines, N-acylamino acids and related compds. also are useful for topical administration to prevent occurrence of breast cancer or other forms of tumors and cancers. Thus 3 g N-propanoyl proline was dissolved in 9 mL water and 3 mL propylene glycol; the solution was mixed with 45 g hydrophobic ointment.

L7 ANSWER 3 OF 26 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 2004:515503 CAPLUS

DOCUMENT NUMBER: 141:71452

TITLE: Preparation of pyridine derivatives as JNK inhibitors

INVENTOR(S): Kallin, Elisabeth; Plobeck, Niklas; Swahn, Britt-Marie
Astrazeneca Ab, Swed.

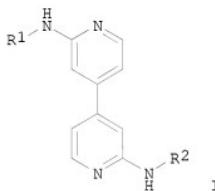
PATENT ASSIGNEE(S): PCT Int. Appl., 98 pp.

SOURCE: CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|------|----------|-----------------|------------|
| WO 2004052880 | A1 | 20040624 | WO 2003-SE1911 | 20031208 |
| W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH,
CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD,
GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC,
LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO,
NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ,
TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW
RW: BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ,
BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE,
ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK,
TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG | | | | |
| AU 2003302919 | A1 | 20040630 | AU 2003-302919 | 20031208 |
| PRIORITY APPLN. INFO.: | | | SE 2002-3654 | A 20021209 |
| OTHER SOURCE(S):
GI | | | WO 2003-SE1911 | W 20031208 |



AB The title compds. [I; R1 = aryl or heteroaryl, each of which is optionally substituted with one or more of R3, OR3, OCOR3, COOR3, COR3, CONR3R4, NHCOR3, NR3R4, NHSO2R3, SO2R3, SO2NR3R4, SR3, CN, halo, NO2; R2 = R5, R6, COR5, COR6, CONHR5, CONHR6, CON(R6)2, COOR5, COOR6, SO2R5, SO2R6; R3, R4 = H, alkyl, cycloalkyl, etc.; R5 = (un)substituted (hetero)aryl; R6 = H, alkyl, cycloalkyl, etc.], were prepared and formulated. E.g., a 4-step synthesis of N,N'-bis[4-(trifluoromethyl)phenyl]-4,4'-bipyridine-2,2'-diamine, starting from 2-chloropyridine, was given. Typical Ki values for the compds. I are in the range of about 0.001 to about 10,000 nM in assay for inhibition of JNK3.

L7 ANSWER 4 OF 26 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 2004:467738 CAPLUS
DOCUMENT NUMBER: 141:17591
TITLE: Agent having a destructive effect on malignant tumors and method for the production
INVENTOR(S): Groke, Karl; Herwig, Ralf
PATENT ASSIGNEE(S): C.Y.L. Handelsges. m.b.H., Austria; Ferdinand, Peter
SOURCE: PCT Int. Appl., 35 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: German
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE | |
|---|------|--|-----------------|------------|--|
| WO 2004047832 | A1 | 20040610 | WO 2003-EP50712 | 20031013 | |
| W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW | | | | | |
| RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG | | | | | |
| AT 2002001778 | A | 20040815 | AT 2002-1778 | 20021127 | |
| AT 412447 | B | 20050325 | | | |
| CA 2507273 | A1 | 20040610 | CA 2003-2507273 | 20031013 | |
| AU 2003285351 | A1 | 20040618 | AU 2003-285351 | 20031013 | |
| EP 1565176 | A1 | 20050824 | EP 2003-778338 | 20031013 | |
| EP 1565176 | B1 | 20060524 | | | |
| R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK | | | | | |
| JP 20060508998 | T | 20060316 | JP 2004-554531 | 20031013 | |
| AT 326958 | T | 20060615 | AT 2003-778338 | 20031013 | |
| PT 1565176 | T | 20061031 | PT 2003-778338 | 20031013 | |
| ES 2268452 | T3 | 20070316 | ES 2003-778338 | 20031013 | |
| US 2006292218 | A1 | 20061228 | US 2006-536777 | 20060907 | |
| PRIORITY APPLN. INFO.: | | | AT 2002-1778 | A 20021127 | |
| | | | EP 2003-778338 | A 20031013 | |
| | | | WO 2003-EP50712 | W 20031013 | |
| AB Disclosed is an agent which has a destructive effect on malignant tumors and contains alpha-ketoglutaric acid, N-acetyl-seleno-L-methionine, N-acetyl-L-methionine, and a compound that is capable of forming azomethine and is selected among the group 5-hydroxymethylfurfural, dehydroascorbic acid, maitol, and vanillin as an active substance, 5-hydroxymethylfurfural being preferred. The inventive agent can be used in the form of an infusion, in an oral or rectal form of administration, or as an irrigation in cancer therapy. The treatment of cancer patients with the following infusion solution is reported: α -ketoglutaric acid 9.0 g/L; 5-hydroxymethyl furfural 3.0 g/L; N-acetyl-seleno-L-methionine 2.0 mg/L; N-acetyl-L-methionine 100.00 mg/L; glucose 30.0 g/L; sodium and potassium ions to set pH. | | | | | |
| REFERENCE COUNT: | 4 | THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT | | | |

L7 ANSWER 5 OF 26 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 2003:434321 CAPLUS

DOCUMENT NUMBER: 139:923

TITLE: Methods and compositions for ameliorating the undesirable effects of chemotherapy

INVENTOR(S): Kil, Jonathan; Lynch, Eric D.

PATENT ASSIGNEE(S): Sound Pharmaceuticals Incorporated, USA

SOURCE: PCT Int. Appl., 27 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---------------|------|----------|-----------------|----------|
| WO 2003045334 | A2 | 20030605 | WO 2002-US38279 | 20021127 |

WO 2003045334 A3 20040226
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN,
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LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH,
PL, PT, RO, RU, SC, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT,
TZ, UR, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY,
KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES,
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CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

CA 2466869 A1 20030605 CA 2002-2466869 20021127
AU 2002352982 A1 20030610 AU 2002-352982 20021127
US 2003157191 A1 20030821 US 2002-307245 20021127
EP 1461033 A2 20040929 EP 2002-789945 20021127
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IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, SK
CN 1596111 A 20050316 CN 2002-823676 20021127
JP 2005510537 T 20050421 JP 2003-546839 20021127
US 2006089313 A1 20060427 US 2005-299084 20051209
US 2001-334140P P 20011129
US 2002-307245 A1 20021127
WO 2002-US38279 W 20021127

PRIORITY APPLN. INFO.:

AB In one aspect, the present invention provides chemoprotectant compns. that comprise at least two of the chemoprotectants disclosed herein. The chemoprotectant compns. of the invention are useful, for example, for ameliorating at least one adverse effect of chemotherapy. In another aspect, the present invention provides methods of ameliorating at least one adverse effect of chemotherapy, the methods each comprising the step of administering to a subject undergoing chemotherapy an amount of a chemoprotectant composition that is effective to ameliorate at least one adverse effect of the chemotherapy. The chemoprotectants include glutathione or precursors thereof, antioxidants, and glutathione peroxidase mimics. For example, N-acetylcysteine, ebselen, and allopurinol, alone or in combination, did not inhibit the ability of cisplatin to kill cultured NuTu-19 ovarian cancer cells as measured using the MTS cell viability assay.

L7 ANSWER 6 OF 26 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 2002:608891 CAPLUS
DOCUMENT NUMBER: 137:304430
TITLE: L-Methionine Inhibits Reaction of DNA with Anticancer
cis-Diamminedichloroplatinum(II)
AUTHOR(S): Vrana, Oldrich; Brabec, Viktor
CORPORATE SOURCE: Institute of Biophysics, Academy of Sciences of the
Czech Republic, Brno, CZ-61265, Czech Rep.
SOURCE: Biochemistry (2002), 41(36), 10994-10999
CODEN: BICHAW; ISSN: 0006-2960
PUBLISHER: American Chemical Society
DOCUMENT TYPE: Journal
LANGUAGE: English

AB Sufficient evidence has accumulated to identify DNA as the relevant pharmacol. target of antitumor cisplatin [cis-diamminedichloroplatinum(II)]. This drug is administered i.v. so that before it reaches DNA in the nucleus of tumor cells it may interact with various compds. including sulfur-containing mols. such as L-methionine or the compds. containing these residues. L-Methionine increases the rate of reaction of cisplatin with monomeric GMP, and it was suggested on the basis of these results previously obtained by other authors that methionine residues could mediate the transfer of platinum onto DNA. We studied in the present work the reactions of the 1:1 complex formed between cisplatin and L-methionine or N-acetyl-L-methionine with

synthetic, single- and double-stranded oligodeoxyribonucleotides and natural, high mol. mass DNA by using high-pressure liquid chromatog. and flameless atomic absorption spectrophotometry. The results demonstrate that both L-methionine and N-acetyl-L-methionine decrease the rate of reaction of cisplatin with base residues in natural, high mol. mass DNA. Thus, the possibility that cisplatin bound to methionine residues serves as a drug reservoir available for platination of DNA in the nucleus of tumor cells appears unlikely.

REFERENCE COUNT: 22 THERE ARE 22 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L7 ANSWER 7 OF 26 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1999;595178 CAPLUS

DOCUMENT NUMBER: 131:243258

TITLE: Preparation of thieno[2,3-c]pyrans and thieno[2,3-c]pyridines as modulators of protein tyrosine phosphatases (PTPases)

INVENTOR(S): Moller, Niels Peter Hundahl; Andersen, Henrik Sune; Iversen, Lars Fogh; Olsen, Ole Hvilsted; Branner, Sven; Holsworth, Daniel Dale; Bakir, Farid; Judge, Luke Milburn; Axe, Frank Urban; Jones, Todd Kevin; Ripka, William Charles; Ge, Yu; Uyeda, Roy Teruyuki Novo Nordisk A/S, Den.; Ontogen Corporation

PATENT ASSIGNEE(S): PCT Int. Appl., 157 pp.

SOURCE: CODEN: PIXXD2

DOCUMENT TYPE: Patent
LANGUAGE: English

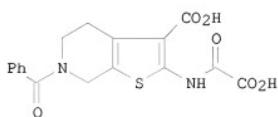
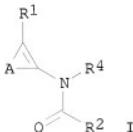
FAMILY ACC. NUM. COUNT: 6
PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|------|----------|-----------------|------------|
| WO 9946267 | A1 | 19990916 | WO 1999-DK121 | 19990311 |
| W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, UZ, VN, YU, ZW | | | | |
| RW: GH, GM, KE, LS, MW, SD, SL, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG | | | | |
| CA 2323493 | A1 | 19990916 | CA 1999-2323493 | 19990311 |
| AU 9927135 | A | 19990927 | AU 1999-27135 | 19990311 |
| BR 9908726 | A | 20001121 | BR 1999-8726 | 19990311 |
| EP 1080095 | A1 | 20010307 | EP 1999-907332 | 19990311 |
| EP 1080095 | B1 | 20051102 | | |
| R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, PT, IE, SI, LT, FI, RO | | | | |
| US 6262044 | B1 | 20010717 | US 1999-268490 | 19990311 |
| JP 2002506072 | T | 20020226 | JP 2000-535645 | 19990311 |
| HU 2001004984 | A2 | 20020429 | HU 2001-4984 | 19990311 |
| HU 2001004984 | A3 | 20030728 | | |
| AT 308546 | T | 20051115 | AT 1999-907332 | 19990311 |
| ZA 9902036 | A | 19991001 | ZA 1999-2036 | 19990312 |
| NO 2000004527 | A | 20001107 | NO 2000-4527 | 20000911 |
| MX 2000PA08927 | A | 20010328 | MX 2000-PA8927 | 20000912 |
| IN 2000CN00375 | A | 20050304 | IN 2000-CN375 | 20000912 |
| US 6410586 | B1 | 20020625 | US 2001-810266 | 20010316 |
| US 2003069267 | A1 | 20030410 | US 2002-158464 | 20020528 |
| US 6951878 | B2 | 20051004 | | |
| PRIORITY APPLN. INFO.: | | | DK 1998-344 | A 19980312 |
| | | | DK 1998-480 | A 19980403 |

| | | | |
|----|--------------|----|----------|
| DK | 1998-938 | A | 19980715 |
| DK | 1998-1385 | A | 19981028 |
| DK | 1998-1612 | A | 19981207 |
| US | 1998-82915P | P | 19980424 |
| US | 1998-93525P | P | 19980721 |
| US | 1998-108747P | P | 19981117 |
| US | 1999-268490 | A3 | 19990311 |
| WO | 1999-DK121 | W | 19990311 |
| US | 2001-810266 | A3 | 20010316 |

OTHER SOURCE(S):
GI

MARPAT 131:243258



AB Thieno[2,3-c]pyrans and thieno[2,3-c]pyridines (I) [A = atoms to complete various 5/5 and 5/6 bicyclic heterocycles, e.g., thiopuridines, thieno(thio)pyrans, benzothiophenes, etc.; R1 and R2 = independently acyl, OH or derivs., CF₃, NO₂, cyano, SO₃H, (un)substituted NH₂ or PO₃H₂, or various 5-membered heterocycles; R4 = H, OH, alkyl, (un)substituted aryl or aralkyl, (un)substituted NH₂, alkoxy] were prepared as inhibitors of Protein Tyrosine Phosphatases (PTPases) such as PTP1B, CD45, SHP-1, SHP-2, PTP_a, LAR, and HePTP. The compds. are useful in the treatment of type I diabetes, type II diabetes, impaired glucose tolerance, insulin resistance, obesity, immune dysfunctions including autoimmunity diseases with dysfunctions of the coagulation system, allergic diseases including asthma, osteoporosis, proliferative disorders including cancer and psoriasis, diseases with decreased or increased synthesis or effects of growth hormone, diseases with decreased or increased synthesis of hormones or cytokines that regulate the release of/or response to growth hormone, diseases of the brain including Alzheimer's disease and schizophrenia, and infectious diseases. For instance, 2-amino-6-benzoyl-4,5,6,7-tetrahydrothieno[2,3-c]pyridine-3-carboxylic acid Et ester was amidated with Et oxalyl chloride in THF (84%), followed by hydrolysis of the ester function with NaOH in aqueous solution to give the title compound(II) as the mono-Na salt (III) in 79% yield. In an *in vitro* test against PTP1B expressed in *E. coli* and purified by known methods, III had a Ki of 51 μ M.

REFERENCE COUNT: 8 THERE ARE 8 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L7 ANSWER 8 OF 26 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 1999:595127 CAPLUS

DOCUMENT NUMBER: 131:228643

TITLE: Preparation of oxallylaminothiophene derivatives as modulators of protein tyrosine phosphatases (PTPases)

INVENTOR(S): Richter, Lutz Stefan; Andersen, Henrik Sune; Vagner, Josep; Jeppesen, Claus Bekker; Moller, Niels Peter Hundahl; Branner, Sven; Jeppesen, Lone; Olsen, Ole Hvilsted; Iversen, Lars Fogh; Holsworth, Daniel Dale; Axe, Frank Urban; Ge, Yu; Jones, Todd Kevin; Ripka, William Charles; Uyeda, Roy Teruyuki; Su, Jing; Bakir, Farid; Judge, Luke Milburn

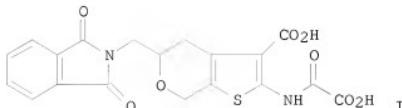
PATENT ASSIGNEE(S): Novo Nordisk A/S, Den.; Ontogen Corporation; Richter,
 Birgith
 SOURCE: PCT Int. Appl., 230 pp.
 CODEN: PIXXD2
 DOCUMENT TYPE: Patent
 LANGUAGE: English
 FAMILY ACC. NUM. COUNT: 6
 PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|------|----------|-----------------|----------|
| WO 9946237 | A1 | 19990916 | WO 1999-DK126 | 19990312 |
| W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, US, UG, VN, YU, ZW | | | | |
| RW: GH, GM, KE, LS, MW, SD, SL, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG | | | | |
| US 6225329 | B1 | 20010501 | US 1999-265069 | 19990309 |
| US 2002019412 | A1 | 20020214 | US 1999-265316 | 19990309 |
| AU 9927139 | A | 19990927 | AU 1999-27139 | 19990311 |
| US 6262044 | B1 | 20010717 | US 1999-268490 | 19990311 |
| CA 2323472 | A1 | 19990916 | CA 1999-2323472 | 19990312 |
| ZA 9902029 | A | 19990927 | ZA 1999-2029 | 19990312 |
| ZA 9902032 | A | 19990927 | ZA 1999-2032 | 19990312 |
| ZA 9902038 | A | 19990927 | ZA 1999-2038 | 19990312 |
| ZA 9902036 | A | 19991001 | ZA 1999-2036 | 19990312 |
| BR 9908723 | A | 20001121 | BR 1999-8723 | 19990312 |
| EP 1080068 | A1 | 20010307 | EP 1999-907336 | 19990312 |
| R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, PT, IE, SI, LT, FI, RO | | | | |
| HU 2001002612 | A2 | 20011128 | HU 2001-2612 | 19990312 |
| JP 2004500308 | T | 20040108 | JP 2000-535620 | 19990312 |
| NO 2000004526 | A | 20001108 | NO 2000-4526 | 20000911 |
| MX 2000PA08921 | A | 20020409 | MX 2000-PA8921 | 20000912 |
| US 6410586 | B1 | 20020625 | US 2001-810266 | 20010316 |
| US 2003069267 | A1 | 20030410 | US 2002-158464 | 20020528 |
| US 6951878 | B2 | 20051004 | | |

| | | |
|------------------------|----------------|------------|
| PRIORITY APPLN. INFO.: | DK 1998-350 | A 19980312 |
| | DK 1998-345 | A 19980312 |
| | DK 1998-343 | A 19980312 |
| | DK 1998-342 | A 19980312 |
| | DK 1998-344 | A 19980312 |
| | DK 1998-347 | A 19980312 |
| | DK 1998-346 | A 19980312 |
| | DK 1998-348 | A 19980312 |
| | DK 1998-479 | A 19980403 |
| | DK 1998-472 | A 19980403 |
| | DK 1998-473 | A 19980403 |
| | DK 1998-478 | A 19980403 |
| | DK 1998-475 | A 19980403 |
| | DK 1998-474 | A 19980403 |
| | DK 1998-476 | A 19980403 |
| | DK 1998-480 | A 19980403 |
| | US 1998-82912P | P 19980424 |
| | DK 1998-667 | A 19980515 |
| | US 1998-88115P | P 19980605 |
| | DK 1998-939 | A 19980715 |
| | DK 1998-940 | 19980715 |
| | DK 1998-938 | 19980715 |

| | | |
|----|--------------|-------------|
| DK | 1998-1385 | 19981028 |
| DK | 1998-1561 | 19981126 |
| DK | 1998-1612 | 19981207 |
| US | 1998-82365P | P 19980420 |
| US | 1998-82371P | P 19980420 |
| US | 1998-82373P | P 19980420 |
| US | 1998-82913P | P 19980424 |
| US | 1998-82914P | P 19980424 |
| US | 1998-82915P | P 19980424 |
| US | 1998-93525P | P 19980721 |
| US | 1998-93638P | P 19980721 |
| US | 1998-108747P | P 19981117 |
| US | 1999-268490 | A3 19990311 |
| WO | 1999-DK126 | W 19990312 |
| US | 2001-810266 | A3 20010316 |

GI



AB Oxalylaminoheterocycles (e.g., oxalylaminothiophene and oxalylaminothiopyran derivs., etc.) were prepared as inhibitors of Protein Tyrosine Phosphatases (PTPases), such as PTP1B, TC-PTP, CD45, SHP-1, SHP-2, PTP α , PTP ϵ , PTP μ , PTP δ , PTP γ , PTP ζ , PTP β , PTPD1, PTPD2, PTPH1, PTP-MEG1, PTP-LAR, and HePTP. These compds. are indicated in the management or treatment of a broad range of diseases such as autoimmune diseases, acute and chronic inflammation, osteoporosis, various forms of cancer and malignant diseases, and type I diabetes and type II diabetes. For instance, 2-amino-5-hydroxymethyl-4,7-dihydro-5H-thieno[2,3-c]pyran-3-carboxylic acid tert-Bu ester (preparation given) was reacted with phthalimide in THF, PPh₃, and DIAD to form the 5-phthalimidomethyl derivative (47%). The amine was amidated with imidazol-1-yl-oxoacetic acid tert-Bu ester in CH₂C₁₂ and TEA (99%), followed by hydrolysis of the ester function with TFA in CH₂C₁₂, to give 5-(1,3-dioxo-1,3-dihydroisoindol-2-ylmethyl)-2-(oxalylamino)-4,7-dihydro-5H-thieno[2,3-c]pyran-3-carboxylic acid (I) in 57% yield. In an *in vitro* test against PTP1B expressed in *E. coli* and purified by known methods, Ki values at various inhibitor concns. were determined. An anal. of selectivity of two PTPase inhibitors against PTP1B, PTP-LAR, PTP ϵ , CD45, and PTP β showed that one compound of the invention is a non-selective inhibitor, whereas another behaves like a selective inhibitor.

REFERENCE COUNT: 2 THERE ARE 2 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L7 ANSWER 9 OF 26 CAPLUS COPYRIGHT 2008 ACS on STN
 ACCESSION NUMBER: 1998:543993 CAPLUS
 DOCUMENT NUMBER: 129:259749
 TITLE: Growth inhibition of subcutaneously transplanted hepatomas without cachexia by alteration of the dietary arginine-methionine balance
 AUTHOR(S): Millis, Richard M.; Diya, Cornelius A.; Reynolds, Michael E.; Dehkordi, Ozra; Bond, Vernon, Jr.
 CORPORATE SOURCE: Dep. Physiology & Biophysics & Dep. Human Nutrition, Howard Univ., Washington, DC, 20059, USA

SOURCE: Nutrition and Cancer (1998), 31(1), 49-55
 CODEN: NUCADQ; ISSN: 0163-5581
 PUBLISHER: Lawrence Erlbaum Associates, Inc.
 DOCUMENT TYPE: Journal
 LANGUAGE: English
AB Alteration of the dietary arginine-methionine balance with synthetic L-amino acids inhibits the growth of s.c. transplanted Morris hepatoma at the expense of maintaining body weight in rats. L-Methionine is susceptible to biochemical degradation which may contribute to a deficiency state. The growth of s.c. hepatoma transplants and body growth maintenance were studied in rats fed diets containing L-methionine in the form of degradation-resistant N-acetyl-L-methionine (NALM) for 28 days. Tumor-free and tumor-bearing rats fed a control diet with amino acids replacing protein had body weight gains of 31.3 ± 1.0 and 19.1 ± 0.5 g (12 and 7%), resp. Rats fed 6 exptl. diets with varying L-arginine-NALM balances had body weight gains ranging from 18.4 ± 0.3 to 26.7 ± 0.9 g (7-10%). Tumor weight in control rats was $10.65 \pm 0.24\%$ of body weight. Diets supplemented with L-arginine in combination with normal and deficient amounts of NALM decreased the tumor wts. by 35 and 38%, resp. Thus, dietary replacement of L-methionine with NALM and supplementation with L-arginine inhibits the growth of s.c. transplanted Morris hepatoma in the absence of cachexia.
 REFERENCE COUNT: 45 THERE ARE 45 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L7 ANSWER 10 OF 26 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1996:694251 CAPLUS

DOCUMENT NUMBER: 125:326402

TITLE: An immunoreactive conjugate, method for its preparation, antibodies to the conjugate and a pharmaceutical composition and diagnostic device containing them

INVENTOR(S): Maes, Roland

PATENT ASSIGNEE(S): Anda Biologicals S.A., Fr.

SOURCE: Eur. Pat. Appl., 19 pp.

CODEN: EPXXDW

DOCUMENT TYPE: Patent

LANGUAGE: French

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|-----------------------|------|----------|-----------------|------------|
| EP 736770 | A2 | 19961009 | EP 1996-870042 | 19960401 |
| EP 736770 | A3 | 19970502 | | |
| R: BE, DE, FR, GB, IT | | | | |
| BE 1009230 | A6 | 19970107 | BE 1995-316 | 19950405 |
| BE 1009917 | A6 | 19971104 | BE 1996-113 | 19960208 |
| | | | BE 1995-316 | A 19950405 |
| | | | BE 1996-113 | A 19960208 |

AB An immunoreactive conjugate is disclosed which contains 1 or more haptens consisting of a sulfhydryl group and one of the following: amino acids, carbohydrates, amino carbohydrates, phosphatidylinositol, sphingosine, and their nitrosyl, acyl, or acetyl derivs., the haptens being coupled to a protein with a mol. weight >8000 Kd and/or a solid support by a coupling agent capable of binding to the sulfhydryl group of the hapten. Thus, NO-cysteine and NO-N-acetyl-L-cysteine conjugates with albumin were prepared, and birds and mammals were vaccinated. IgG and IgM class antibodies specific for N-acetyl-L-cysteine were detected in the subjects. Addnl. analyses demonstrated that many HIV-pos. patients have IgG specific for acetyl-cysteine. Pharmaceutical compns. using these immunoreactive conjugates can be used in the prevention and/or treatment of autoimmunity,

AIDS, cancer, tuberculosis and a variety of other diseases.

L7 ANSWER 11 OF 26 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 1996:476772 CAPLUS
DOCUMENT NUMBER: 125:115140
TITLE: Preparation of nitric oxide-releasing agents for
reducing metastasis risk
INVENTOR(S): Korthuis, Ronald J.; Kong, Lipu; Keefer, Larry K.
PATENT ASSIGNEE(S): United States Dept. of Health and Human Services, USA
SOURCE: PCT Int. Appl., 47 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|--|------|----------|-----------------|------------|
| WO 9615781 | A1 | 19960530 | WO 1995-US15381 | 19951120 |
| W: AM, AT, AU, BB, BG, BR, BY, CA, CH, CN, CZ, DE, DK, EE, ES, FI,
GB, GE, HU, IS, JP, KE, KG, KP, KR, KZ, LK, LR, LT, LU, LV, MD,
MG, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, TJ,
TM, TT
RW: KE, LS, MW, SD, SZ, UG, AT, BE, CH, DE, DK, ES, FR, GB, GR, IE,
IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR,
NE, SN, TD, TG | | | | |
| US 5700830 | A | 19971223 | US 1994-344341 | 19941122 |
| AU 9642460 | A | 19960617 | AU 1996-42460 | 19951120 |
| AU 699387 | B2 | 19981203 | | |
| EP 804177 | A1 | 19971105 | EP 1995-940844 | 19951120 |
| R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE
JP 10509181 | T | 19980908 | JP 1995-517097 | 19951120 |
| CA 2205555 | C | 20010821 | CA 1995-2205555 | 19951120 |
| CA 2205555 | A1 | 19960530 | | |
| PRIORITY APPLN. INFO.: | | | US 1994-344341 | A 19941122 |
| | | | WO 1995-US15381 | W 19951120 |

OTHER SOURCE(S): MARPAT 125:115140
AB Title agents, comprising N202-containing biopolymers, e.g., RN(O):NOR1 [R = (in)organic moiety; R1 = R, a pharmaceutically acceptable metal center (sic), pharmaceutically acceptable cation] wherein said N202- group is bonded to said biopolymer through ≥ 1 of R or R1, were prepared Thus, ClCH₂COCl was aminated and amidated by MeNH₂ and the product maintained 48h at 25° with NaOMe/MeOH under 40psi NO to give NaON:N(O)NMeCH₂CONHMe. Data for biol. activity of H₂NCH₂CH₂N[N(O)NO]-CH₂CH₂NH₃⁺ were given in graphic form.

L7 ANSWER 12 OF 26 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 1996:357099 CAPLUS
DOCUMENT NUMBER: 125:26237
TITLE: Antiviral drugs and immunomodulators containing
chelate-forming agents
INVENTOR(S): Bacanu, Serban Al; Ionescu, Iulian; Sarzea, Sorin;
Tomas, Stefan Teodor
PATENT ASSIGNEE(S): Medicor Pharma Vertriebs GmbH, Germany; Sicomed S.A.
SOURCE: PCT Int. Appl., 21 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: German
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|------------|------|------|-----------------|------|
|------------|------|------|-----------------|------|

WO 9606639 A2 19960307 WO 1995-EP3426 19950831
WO 9606639 A3 19960725

W: AM, AT, AU, BB, BG, BR, BY, CA, CH, CN, CZ, DE, DK, EE, ES, FI,
GB, GE, HU, IS, JP, KE, KG, KP, KR, KZ, LR, LT, LU, LV, MD,
MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK,
TJ, TM, TT, UA, UG, US, UZ, VN, BE, FR, GR, IE, IT, MC, NL, BF,
BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG, SZ
RW: KE, MM, SD, SZ, UG, AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT,
LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE,
SN, TD, TG

DE 4431175 A1 19960411 DE 1994-4431175 19940901
AU 9535194 A 19960322 AU 1995-35194 19950831
PRIORITY APPLN. INFO.: DE 1994-4431175 A 19940901
WO 1995-EP3426 W 19950831

AB Combinations of chelate-forming agents and essential amino acids or their derivs. which are optionally complexed with bivalent metal ions are useful as antiviral agents, immunomodulators for treatment of autoimmune diseases, anticancer agents, and drugs for treatment of neurodegenerative diseases. Thus, Rodilemid (CaNa₂EDTA/cysteine/Ca gluconate combination) (625 µg/mL) strongly inhibited HIV-1 in cultured MT-4 cells without inhibiting cell growth.

L7 ANSWER 13 OF 26 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1996:162493 CAPLUS

DOCUMENT NUMBER: 124:157165

TITLE: Ring-Opened Adducts of the Anticancer Drug Carboplatin with Sulfur Amino Acids

AUTHOR(S): Barnham, Kevin J.; Djurjan, Milos I.; Murdoch, Piedad del Socorro; Ranford, John D.; Sadler, Peter J.

CORPORATE SOURCE: Birkbeck College, University of London, London, WC1H 0PP, UK

SOURCE: Inorganic Chemistry (1996), 35(4), 1065-72
CODEN: INOCAJ; ISSN: 0020-1669

PUBLISHER: American Chemical Society

DOCUMENT TYPE: Journal

LANGUAGE: English

AB Reactions of the anticancer drug carboplatin (Paraplatin) with a variety of sulfur-containing amino acids have been investigated by ¹H and ¹⁵N NMR spectroscopy and by HPLC. Thiols react very slowly and sulfur-bridged species containing four-membered Pt₂S₂ rings are the predominant products. In contrast reactions with thioether ligands are much more rapid, and kinetics for the initial stages of the reaction with L-methionine have been determined ($k = 2.7 + 10^{-3}$ M⁻¹ s⁻¹). Surprisingly, very stable ring-opened species are formed such as cis-[Pt(CBDA-O)(NH₃)₂(L-HMet-S)] which has a half-life for Met-S,N ring-closure of 28 h at 310 K. A study of the formation of the analogous product for N-acetyl-L-methionine and its subsequent ring closure is reported. Reactions such as these may play a role in the biol. activity of carboplatin.

L7 ANSWER 14 OF 26 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1990:191544 CAPLUS

DOCUMENT NUMBER: 112:191544

TITLE: Thiol and thioether suppression of cis-platinum-induced nephrotoxicity in rats bearing the Walker 256 carcinosarcoma

AUTHOR(S): Jones, Mark M.; Basinger, Mark A.

CORPORATE SOURCE: Cent. Mol. Toxicol., Vanderbilt Univ., Nashville, TN, 37235, USA

SOURCE: Anticancer Research (1989), 9(6), 1937-41
CODEN: ANTRD4; ISSN: 0250-7005

DOCUMENT TYPE: Journal

- LANGUAGE: English
- AB An examination of 18 thiols and thio ethers revealed that the simultaneous administration of several of these with cis-platinum (CDDP) at 7.5 mg/kg (25 μ mol/kg) i.v., as a single injection to rats bearing the Walker 256 carcinosarcoma led to significant reduction in the nephrotoxicity typically found with cis-platinum, and no apparent interference in its anti-neoplastic action towards this tumor. The thiols and thiol ethers were administered at a 20-fold molar excess to the CDDP and were combined with the CDDP immediately prior to administration. The most effective compds. in suppressing nephrotoxicity were D-, and L-methionine, Me and Et L-methioninate, and N-acetyl-DL-methionine.
- L7 ANSWER 15 OF 26 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 1989:406348 CAPLUS
DOCUMENT NUMBER: 111:6348
TITLE: The effects of dietary alterations of L-arginine, L-methionine, and N-acetyl-L-methionine on the growth of Morris hepatoma #3924A and tumor polyamine levels
AUTHOR(S): Diya, Cornelius Adeniyi
CORPORATE SOURCE: Howard Univ., Washington, DC, USA
SOURCE: (1987) 240 pp. Avail.: Univ. Microfilms Int., Order No. DA8809013
From: Diss. Abstr. Int. B 1989, 49(7), 2573
DOCUMENT TYPE: Dissertation
LANGUAGE: English
AB Unavailable
- L7 ANSWER 16 OF 26 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 1988:542107 CAPLUS
DOCUMENT NUMBER: 109:142107
TITLE: Nitrogen-14 NMR studies of amine release from platinum anticancer drugs: models and human blood plasma
AUTHOR(S): Norman, Richard E.; Sadler, Peter J.
CORPORATE SOURCE: Dep. Chem., Birkbeck Coll., London, WC1E 6BT, UK
SOURCE: Inorganic Chemistry (1988), 27(20), 3583-7
CODEN: INOCAJ; ISSN: 0020-1669
DOCUMENT TYPE: Journal
LANGUAGE: English
AB The feasibility of using ^{14}N { ^1H } NMR spectroscopy to follow reactions of Pt(II) antitumor drugs under biol. relevant conditions has been investigated. Amine release from cis-PtCl₂(NH₃)₂ upon reaction with both L-methionine and N-acetyl-L-methionine and from PtCl₂(1,2-diaminoethane) on reaction with L-methionine in aqueous solution can be readily detected.
Upon incubation (37° for 24 h) of cis-PtCl₂(NH₃)₂ with human blood plasma supplemented with L-methionine, at least one NH₃ ligand appears to be lost. Ammonia release is also detected upon addition of excess sodium diethylidithiocarbamate (an agent used clin. to reverse cisplatin toxicity) to plasma incubated with cis-PtCl₂(NH₃)₂ (37° for 2 h). Other ^{14}N peaks assigned in plasma spectra include those for amides, phosphatidylcholines, and N₂. Thus, ^{14}N NMR spectroscopy provides a useful probe for studying these drugs at millimolar concns. under conditions that approach physiol. relevance.
- L7 ANSWER 17 OF 26 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 1986:424506 CAPLUS
DOCUMENT NUMBER: 105:24506
ORIGINAL REFERENCE NO.: 105:4129a, 4132a
TITLE: Adriamycin analogues. Preparation and biological evaluation of some N-(trifluoroacetyl)-14-O-[N-acetyl amino]acyl]adriamycin derivatives

AUTHOR(S): Israel, Mervyn; Taube, David; Seshadri, Ramakrishnan;
 Idriss, John M.
 CORPORATE SOURCE: Coll. Med., Univ. Tennessee, Memphis, TN, 38163, USA
 SOURCE: Journal of Medicinal Chemistry (1986), 29(7), 1273-6
 DOCUMENT TYPE: CODEN: JMCMAR; ISSN: 0022-2623
 LANGUAGE: English
 OTHER SOURCE(S): CASREACT 105:24506
 GI

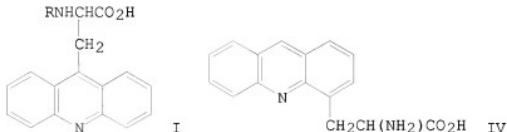
* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *

AB A series of N-(trifluoroacetyl)adriamycin derivs. I (R = H, Me, CH₂Ph, CH₂CH₂Me, CHMe₂, CH₂CHMe₂) with N-acylamino acid esters at the 14-carbinol position were prepared. I were made by reaction of 14-iododaunorubicin II with NaO₂CCH(NHAc)R in DMF-ethylene glycol solvent. Products were evaluated for in vitro growth inhibitory activity and, to a limited extent, in vivo antitumor activity in the murine P388 leukemia system. ID₅₀ values for I vs. cultured CCRF-CEM cells were generally in the same range as those for DNA nonbinding adriamycin analogs (I (R = CH₂Ph) ID₅₀ 0.09). Studies on the rate of esterase-mediated deacylation of the products, in a defined system containing fractionated mouse serum as the source of enzyme, showed no relationship between the in vitro and in vivo activities of these compds. and the relative ease at which the side-chain ester substituents were hydrolyzed.

L7 ANSWER 18 OF 26 CAPLUS COPYRIGHT 2008 ACS on STN
 ACCESSION NUMBER: 1979:570855 CAPLUS
 DOCUMENT NUMBER: 91:170855
 ORIGINAL REFERENCE NO.: 91:27549a,27552a
 TITLE: Pharmacokinetics of 99mTc-acetylmethionine in tumor-bearing animals
 AUTHOR(S): Khachirov, D. G.; Petriev, V. M.; Savin, Yu. I.; Prikhod'ko, A. G.
 CORPORATE SOURCE: Nauchno-Issled. Inst. Med. Radiol., Obninsk, USSR
 SOURCE: Khimiko-Farmatsevticheskii Zhurnal (1979), 13(8), 33-5
 DOCUMENT TYPE: CODEN: KHFZAN; ISSN: 0023-1134
 LANGUAGE: Journal Russian
 AB Administration of 99mTc-labeled N-acetyl-DL-methionine (I) (100-50 µCi i.v.) to rats with exptl. induced muscle sarcomas resulted in the accumulation of 99mTc in different organs and tissues for 24 h. The highest accumulation occurred in the liver and kidneys. The 99mTc level in the neoplastic muscles was higher than in the healthy muscles; however, the difference was not statistically significant to justify the use of I for neoplasm scintigraphy. Similar results were obtained with Na^{99m}TcO₄, but the rate of accumulation of the label in the tissues was markedly lower than with I.

L7 ANSWER 19 OF 26 CAPLUS COPYRIGHT 2008 ACS on STN
 ACCESSION NUMBER: 1977:423695 CAPLUS
 DOCUMENT NUMBER: 87:23695
 ORIGINAL REFERENCE NO.: 87:3773a,3776a
 TITLE: Synthesis and study of β-acridyl-α-alanines and their derivatives
 AUTHOR(S): Konyukhov, V. N.; Sakovich, G. S.; Aksanova, T. N.; Bandurina, T. A.; Radina, L. B.; Pushkareva, Z. V.; Lesnaya, N. A.; Barybin, A. S.
 CORPORATE SOURCE: Ural. Politekh. Inst. im. Kirova, Sverdlovsk, USSR

SOURCE: Khimiko-Farmatsevicheskii Zhurnal (1976), 10(7), 56-9
DOCUMENT TYPE: CODEN: KHFZAN; ISSN: 0023-1134
LANGUAGE: Journal
GI Russian



AB The acridinylalanine I (R = H) (II) was coupled to Ac-Glu-OH anhydride, Ac-Met-OH, and Ac-Phe by dicyclohexylcarbodiimide to give the appropriate I [R = N-acetyl- α -glutamyl, Ac-Met (III), Ac-Phe]. Substitution reaction of 4-(bromomethyl)acridine with AcNHCH(CO₂Et)₂ and subsequent hydrolysis-decarboxylation gave the acridinylalanine IV. II, the N-oxide of II, and III at a daily dose of 100 mg/kg inhibited the growth of lymphosarcoma 35%, 62%, and 13%, resp.

L7 ANSWER 20 OF 26 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1974:499491 CAPLUS

DOCUMENT NUMBER: 81:99491

ORIGINAL REFERENCE NO.: 81:15713a, 15716a

TITLE: Inhibition of carcinogenic and toxic effects of polycyclic hydrocarbons by several sulfur-containing compounds

AUTHOR(S): Wattenberg, Lee W.

CORPORATE SOURCE: Med. Sch., Univ. Minnesota, Minneapolis, MN, USA

SOURCE: Journal of the National Cancer Institute (1940-1978) (1974), 52(5), 1583-7

CODEN: JNCIAM; ISSN: 0027-8874

DOCUMENT TYPE: Journal

LANGUAGE: English

AB Disulfiram (I) [97-77-8] and benzyl thiocyanate [3012-37-1] (PhCH₂SCN) (0.03 mmole/g) and dimethyldithiocarbamate [79-45-8] (0.06 mmole/g) added to the diet inhibited 7,12-dimethylbenz[a]anthracene (II) [57-97-6]-induced mammary tumor formation and adrenal necrosis in female rats. Single oral administration of I (100 mg) 24 hr prior to II administration also suppressed mammary tumor formation. In the mouse, I prevented the occurrence of tumors of the forestomach that resulted from benzo[a]pyrene [50-32-8] in the diet, but did not affect pulmonary adenoma formation in mice given this carcinogen by oral intubation. Cystine [56-89-3] and L-methionine [63-68-3] and its derivs. were inactive as inhibitors of rat mammary tumors and adrenal necrosis. I had no effect on pulmonary adenoma formation from administration of benzo[a]pyrene by oral intubation in female mice.

L7 ANSWER 21 OF 26 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1970:527221 CAPLUS

DOCUMENT NUMBER: 73:127221

ORIGINAL REFERENCE NO.: 73:20717a, 20720a

TITLE: Analogs of methionine as substrates and inhibitors of the methionine adenosyltransferase reaction. Deductions concerning the conformation of methionine

AUTHOR(S): Lombardini, J. B.; Coulter, A. W.; Talalay, Paul

CORPORATE SOURCE: Sch. of Med., Johns Hopkins Univ., Baltimore, MD, USA
SOURCE: Molecular Pharmacology (1970), 6(5), 481-99
CODEN: MOPMA3; ISSN: 0026-895X
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Steric, electronic, and conformational requirements are described for analogs of L-methionine essential to their function as substrates or inhibitors of the methionine adenosyltransferase reaction (EC 2.4.1.13). With the aid of partially purified transferase preps. from Escherichia coli, bakers' yeast, and rat liver, a systematic study of substrate analogs has been undertaken. Inhibitors of the enzyme fall into 3 categories: (a) straight C chain amino acids, such as L-2-amino-4-hexenoic acid (trans but not the cis isomer) and L-2-amino-4-hexynoic acid, which are the most potent inhibitors; (b) cyclic amino acids, among which 1-aminocyclopentanecarboxylic acid and 1 of the 4 isomers of 1-amino-3-methylcyclopentanecarboxylic acid (either the 1R, 3R or the 1S, 3R isomer) are the most powerful; and (c) O-acetyl-L-serine, O-carbamoyl-L-serine, and S-carbamoyl-L-cysteine. Since inhibitors belonging to groups a and b possess considerable conformational rigidity by virtue of the presence of unsatns. or cyclic structures, it has been possible to draw conclusions with respect to the conformation of L-methionine at the active site of the adenosyltransferase reaction. A number of the inhibitors of the methionine adenosyltransferase reaction, such as 1-aminocyclopentanecarboxylic acid and S-carbamoyl-L-cysteine, are known to be inhibitors of the growth of certain microorganisms and tumors. The possibility is suggested that these inhibitory activities may be mediated at least in part through the inhibition of the synthesis of S-adenosyl-L-methionine.

L7 ANSWER 22 OF 26 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 1961:44317 CAPLUS
DOCUMENT NUMBER: 55:44317
ORIGINAL REFERENCE NO.: 55:8609c-e
TITLE: Acylase activity in the liver of rats fed 4-dimethylaminoazobenzene
AUTHOR(S): Kishi, Sanji; Haruno, Katsuhiko; Asano, Bunichi
CORPORATE SOURCE: Showa Med. School, Tokyo
SOURCE: Gann (1960), 51, 235-41
CODEN: GANNA2; ISSN: 0016-450X
DOCUMENT TYPE: Journal
LANGUAGE: Unavailable
AB Activity of acylase in the liver of rats fed 4-dimethylaminoazobenzene (DAB) was measured by using as substrates acetanilide (AA), diacetyl-L-tyrosine (DAT), and acetylmethionine (AM). Activity of acylase for AA in the slightly cirrhotic liver was higher than that in normal liver, and even a severe case showed nearly the normal value, whereas the activity in hepatoma was scarcely detected. When DAT was used for acylase test, pathol. changed livers, including hepatoma, showed higher activity than normal liver. Acylase activity on AM was slightly higher than normal in the pathol. but noncancerous livers. Hepatoma showed 60% of the normal value. The liver of DAB-treated rats in the 4th week of experiment showed higher activity than normal when tested with AA, DAT, or AM. With regenerating liver the activity diminished to about half that of the excised portion of the same liver.

L7 ANSWER 23 OF 26 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 1961:44316 CAPLUS
DOCUMENT NUMBER: 55:44316
ORIGINAL REFERENCE NO.: 55:8608i,8609a-c
TITLE: The effect of toxohormone on iron metabolism
AUTHOR(S): Ono, Tetsuo; Ohashi, Mochihiko; Yago, Nagasumi
CORPORATE SOURCE: Japanese Foundation Cancer Research, Tokyo

SOURCE: Gann (1960), 51, 213-21
DOCUMENT TYPE: CODEN: GANNA2; ISSN: 0016-450X
LANGUAGE: Journal
Unavailable

AB In these expts. there were used 4 kinds of toxohormone (I) preps., which varied in the extraction procedures and activities, all obtained from rat fibrosarcoma. One of them, T-fraction, was Nakahara and Fukuoka's EtOH precipitate, the second one, a-fraction, was a fraction adsorbed on Ca phosphate gel from the H₂O extract of tumor tissues, the third, PSa-fraction, was prepared in the same way as a-fraction by Ca phosphate gel adsorption but from the boiled supernatant of tumor homogenate after removing a-fraction, and the last one, a-CM-fraction, the most active in catalase-depressing action among these 4 preps., was the fraction purified by carboxymethylcellulose column chromatography from a-fraction. All were shown to decrease plasma Fe level of rats. The order of magnitude of this activity was the same as that established for their liver catalase-depressing activity. By using Fe-labeled plasma, it appeared that the lowering of Fe mobilization from the tissue reserve may be the most probable mechanism for action of toxohormone in decreasing plasma Fe.

L7 ANSWER 24 OF 26 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 1961:14595 CAPLUS
DOCUMENT NUMBER: 55:14595
ORIGINAL REFERENCE NO.: 55:29001,2901a
TITLE: Feeding of surface-active substances and effect on infections
AUTHOR(S): Borneff, J.
SOURCE: Archiv fuer Hygiene und Bakteriologie (1957), 141, 578-95
From: C.Z. 1958, 10135.
CODEN: AHBAAH; ISSN: 0003-9144
DOCUMENT TYPE: Journal
LANGUAGE: Unavailable

AB Hostapon (I) and Pril (II), surface-active materials, were given to guinea pigs and mice. I was given in high dose, II in normal dose corresponding to a possible human dose. No toxic effects were found at a level of 325 mg./kg./day, and no effect was found on enteral bacterial flora. Harmful effects were found only with concurrent streptococcal infection and treatment with I or II.

L7 ANSWER 25 OF 26 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 1961:14594 CAPLUS
DOCUMENT NUMBER: 55:14594
ORIGINAL REFERENCE NO.: 55:2900h-i
TITLE: Antitumor effect of amino acid analogs
AUTHOR(S): Abe, Mihoko; Chibata, Ichiro; Hirokawa, Hideo; Kameda, Yukio; Mizuno, Denichi
SOURCE: Yakugaku Zasshi (1960), 80, 1309-11
CODEN: YKZAJ; ISSN: 0031-6903
DOCUMENT TYPE: Journal
LANGUAGE: Unavailable

AB Some methionine analogs which had a marked effect against the solid type Ehrlich ascites carcinoma in mice included L-RCH(NHCOCH₂C₁)CO₂H (R = MeSCH₂CH₂); RCH(NHCOCCH₂C₁)CO₂H; RCH(NHAc)CN; RCH(NHCOCH₂C₁)CN; RCH(NHCOCH₂NH₂.HCl)CN; EtSCH₂CH₂CH(NH₂.1/2H₂SO₄)CN; EtSCH₂CH₂CH(NHCOCH₂C₁)CN.

L7 ANSWER 26 OF 26 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 1958:67871 CAPLUS
DOCUMENT NUMBER: 52:67871

ORIGINAL REFERENCE NO.: 52:12216e-f
TITLE: Behavior of blood glutathione in gastric patients after insulin treatment
AUTHOR(S): Musebeck, Klaus
CORPORATE SOURCE: Med. Akad., Dresden, Germany
SOURCE: Arztl. Forsch. (1957), 11, 313-16
DOCUMENT TYPE: Journal
LANGUAGE: Unavailable
AB Although insulin produced within 10 min. a transient increase in glutathione blood level (I) in healthy controls, 20 I.U. of insulin intravenously lowered I in patients with gastric or duodenal ulcer, or with cancer of the stomach. Resection gave no change in the I response to insulin, but after surgical removal of the ulcer, patients gave a normal response. Injection of thiomedon produced no effect in either controls or patients.

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L3 5 S L2
FILE 'REGISTRY' ENTERED AT 10:14:40 ON 04 MAR 2008
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L5 67 S L4 FAM FUL
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L6 764 S L5
L7 26 S L6 AND (CANCER OR TUMOR OR NEOPLASM)

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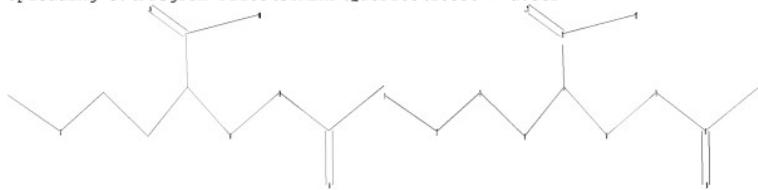
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exact/norm bonds :  
1-2 2-3 5-6 6-7 7-8 8-10  
exact bonds :  
3-4 4-5 5-11 8-9  
normalized bonds :  
11-12 11-13  
  
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L2 0 SEA FAM FUL L1

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SAMPLE SCREEN SEARCH COMPLETED - 0 TO ITERATE

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SEARCH TIME: 00.00.01

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SEARCH TIME: 00.00.01

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SESSION ENTRY SESSION
FULL ESTIMATED COST 273.13 273.35

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E1 1 ACETYLSELENOL/BI
E2 1 ACETYLSELENOLCHOLINE/BI
E3 0 --> ACETYLSELENOMETHIONINE/BI
E4 1 ACETYLSELENON/BI
E5 1 ACETYLSELENONIUM/BI
E6 13 ACETYLSELENOPHEN/BI
E7 2 ACETYLSELENOSEMI/BI
E8 2 ACETYLSELENOSEMICARBAZ/BI
E9 2 ACETYLSELENOSEMICARBAZIDE/BI
E10 1 ACETYLSELENOUREA/BI
E11 1 ACETYLSELIN/BI
E12 8 ACETYLSEMI/BI

=> e selenomethionine
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E2 2 SELENOMETHENO/BI
E3 18 --> SELENOMETHIONINE/BI
E4 1 SELENOMETHIONINE,108/BI
E5 1 SELENOMETHIONINE,115/BI
E6 1 SELENOMETHIONINE,69/BI
E7 97 SELENOMETHYL/BI
E8 7 SELENOMETHYLBENZO/BI
E9 7 SELENOMETHYLBENZOTRIAZOLE/BI
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E12 1 SELENOMETHYLENEDIPHOSPHON/BI

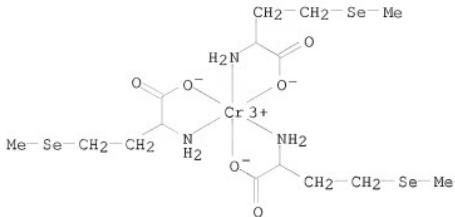
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L5 18 SELENOMETHIONINE/BI

=> d 15 1-18

L5 ANSWER 1 OF 18 REGISTRY COPYRIGHT 2009 ACS on STN
RN 919111-31-2 REGISTRY
ED Entered STN: 02 Feb 2007
CN Chromium, tris[2-(amino- κ N)-4-(methylseleno)butanoato- κ O]-
(CA INDEX NAME)

OTHER NAMES:

CN DL-Selenomethionine chromium
MF C15 H30 Cr N3 O6 Se3
CI CCS
SR CA
LC STN Files: CA, CAPLUS, CASREACT



1 REFERENCES IN FILE CA (1907 TO DATE)
 1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L5 ANSWER 2 OF 18 REGISTRY COPYRIGHT 2009 ACS on STN
 RN 620990-40-1 REGISTRY
 ED Entered STN: 27 Nov 2003
 CN Cytidyllyltransferase, 2-keto-3-deoxyoctonate [1-selenomethionine] (Haemophilus influenzae strain ATCC51907D) fusion protein with hexahistidine (9CI) (CA INDEX NAME)
 OTHER NAMES:
 CN 170: PN: WO03089570 FIGURE: 8 claimed sequence
 FS PROTEIN SEQUENCE
 MF Unspecified
 CI MAN
 SR CA
 LC STN Files: CA, CAPLUS
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 *** USE 'SQD' OR 'SQIDE' FORMATS TO DISPLAY SEQUENCE ***
 1 REFERENCES IN FILE CA (1907 TO DATE)
 1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L5 ANSWER 3 OF 18 REGISTRY COPYRIGHT 2009 ACS on STN
 RN 620990-39-8 REGISTRY
 ED Entered STN: 27 Nov 2003
 CN Cytidyllyltransferase, 2-keto-3-deoxyoctonate [1-selenomethionine] (Escherichia coli strain ATCC10798D) fusion protein with hexahistidine (9CI) (CA INDEX NAME)
 OTHER NAMES:
 CN 168: PN: WO03089570 FIGURE: 7 claimed protein
 FS PROTEIN SEQUENCE
 MF Unspecified
 CI MAN
 SR CA
 LC STN Files: CA, CAPLUS
 *** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
 *** USE 'SQD' OR 'SQIDE' FORMATS TO DISPLAY SEQUENCE ***
 1 REFERENCES IN FILE CA (1907 TO DATE)
 1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L5 ANSWER 4 OF 18 REGISTRY COPYRIGHT 2009 ACS on STN
 RN 620990-38-7 REGISTRY
 ED Entered STN: 27 Nov 2003
 CN Aldolase, phospho-2-keto-3-deoxyoctonate [1-selenomethionine] (Haemophilus influenzae strain ATCC51907D) fusion protein with hexahistidine (9CI) (CA INDEX NAME)

OTHER NAMES:

CN 33: PN: WO03089570 FIGURE: 2 claimed sequence
FS PROTEIN SEQUENCE
MF Unspecified
CI MAN
SR CA
LC STN Files: CA, CAPLUS

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
*** USE 'SQD' OR 'SQIDE' FORMATS TO DISPLAY SEQUENCE ***
 1 REFERENCES IN FILE CA (1907 TO DATE)
 1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L5 ANSWER 5 OF 18 REGISTRY COPYRIGHT 2009 ACS on STN
RN 479648-38-9 REGISTRY
ED Entered STN: 21 Jan 2003
CN Synthase, 2-C-methyl-D-erythritol 2,4-cyclodiphosphate
[1-selenomethionine,69-selenomethionine,108-selenomethionine,115-
selenomethionine] (Haemophilus influenzae) fusion protein with peptide
(synthetic histidine tag) (9CI) (CA INDEX NAME)

OTHER NAMES:

CN 11: PN: WO02102991 FIGURE: 2 claimed sequence
FS PROTEIN SEQUENCE
MF Unspecified
CI MAN
SR CA
LC STN Files: CA, CAPLUS, TOXCENTER, USPATFULL

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
*** USE 'SQD' OR 'SQIDE' FORMATS TO DISPLAY SEQUENCE ***
 1 REFERENCES IN FILE CA (1907 TO DATE)
 1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L5 ANSWER 6 OF 18 REGISTRY COPYRIGHT 2009 ACS on STN
RN 391281-86-0 REGISTRY
ED Entered STN: 11 Feb 2002
CN Cytochrome b 562 [7-selenomethionine] (Escherichia coli) (9CI)
(CA INDEX NAME)
FS PROTEIN SEQUENCE
MF Unspecified
CI MAN
SR CA
LC STN Files: CA, CAPLUS

RELATED SEQUENCES AVAILABLE WITH SEQLINK

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
*** USE 'SQD' OR 'SQIDE' FORMATS TO DISPLAY SEQUENCE ***
 1 REFERENCES IN FILE CA (1907 TO DATE)
 1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L5 ANSWER 7 OF 18 REGISTRY COPYRIGHT 2009 ACS on STN
RN 61125-47-1 REGISTRY
ED Entered STN: 16 Nov 1984
CN Butanoic acid, 2-amino-4-(methylseleno)-, hydrochloride, (2S)- (9CI) (CA
INDEX NAME)

OTHER CA INDEX NAMES:

CN Butanoic acid, 2-amino-4-(methylseleno)-, hydrochloride, (S)-

OTHER NAMES:

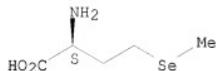
CN L-Selenomethionine hydrochloride

FS STEREOSEARCH

MF C5 H11 N O2 Se . Cl H

LC STN Files: CA, CAPLUS
CRN (3211-76-5)

Absolute stereochemistry.



● HCl

PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

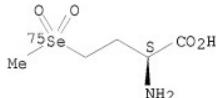
3 REFERENCES IN FILE CA (1907 TO DATE)
3 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L5 ANSWER 8 OF 18 REGISTRY COPYRIGHT 2009 ACS on STN
RN 60343-90-0 REGISTRY
ED Entered STN: 16 Nov 1984
CN Butanoic acid, 2-amino-4-(methylselenonyl-75Se)-, (S)- (9CI) (CA INDEX NAME)

OTHER NAMES:

CN L-Selenomethionine-75Se selenone
FS STEREOSEARCH
MF C5 H11 N O4 Se
LC STN Files: CA, CAPLUS

Absolute stereochemistry.



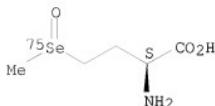
1 REFERENCES IN FILE CA (1907 TO DATE)
1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L5 ANSWER 9 OF 18 REGISTRY COPYRIGHT 2009 ACS on STN
RN 60343-89-7 REGISTRY
ED Entered STN: 16 Nov 1984
CN Butanoic acid, 2-amino-4-(methylseleninyl-75Se)-, (S)- (9CI) (CA INDEX NAME)

OTHER NAMES:

CN L-Selenomethionine-75Se oxide
FS STEREOSEARCH
MF C5 H11 N O3 Se
LC STN Files: CA, CAPLUS

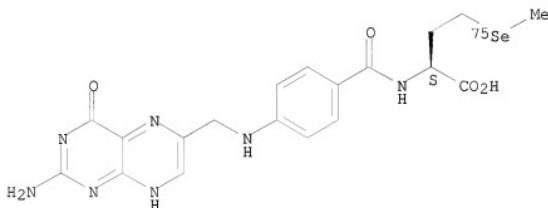
Absolute stereochemistry.



1 REFERENCES IN FILE CA (1907 TO DATE)
1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L5 ANSWER 10 OF 18 REGISTRY COPYRIGHT 2009 ACS on STN
 RN 56927-14-1 REGISTRY
 ED Entered STN: 16 Nov 1984
 CN Butanoic acid, 2-[4-[(2-amino-1,4-dihydro-4-oxo-6-pteridinyl)methyl]amino]benzoyl]amino]-4-(methylseleno-⁷⁵Se)-, (S)- (9CI)
 (CA INDEX NAME)
 OTHER NAMES:
 CN N-Pteroyl-L-selenomethionine labeled with selenium-75
 FS STEREOSEARCH
 MF C19 H21 N7 O4 Se
 LC STN Files: CA, CAPLUS, IFICDB, IFIPAT, IFIUDB, USPATFULL

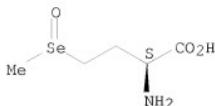
Absolute stereochemistry.



3 REFERENCES IN FILE CA (1907 TO DATE)
3 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L5 ANSWER 11 OF 18 REGISTRY COPYRIGHT 2009 ACS on STN
 RN 19192-78-0 REGISTRY
 ED Entered STN: 16 Nov 1984
 CN Butanoic acid, 2-amino-4-(methylseleninyl)-, (2S)- (CA INDEX NAME)
 OTHER CA INDEX NAMES:
 CN Butanoic acid, 2-amino-4-(methylseleninyl)-, (S)-
 CN Butyric acid, 2-amino-4-(methylseleninyl)-, L- (8CI)
 OTHER NAMES:
 CN Selenomethionine selenium oxide
 FS STEREOSEARCH
 MF C5 H11 N O3 Se
 LC STN Files: CA, CAPLUS, CASREACT, TOXCENTER

Absolute stereochemistry.

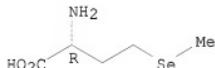


PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

15 REFERENCES IN FILE CA (1907 TO DATE)
 15 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L5 ANSWER 12 OF 18 REGISTRY COPYRIGHT 2009 ACS on STN
 RN 13091-98-0 REGISTRY
 ED Entered STN: 16 Nov 1984
 CN Butanoic acid, 2-amino-4-(methylseleno)-, (2R)- (CA INDEX NAME)
 OTHER CA INDEX NAMES:
 CN Butanoic acid, 2-amino-4-(methylseleno)-, (R)-
 CN Butyric acid, 2-amino-4-(methylselenyl)-, D- (8CI)
 OTHER NAMES:
 CN D-Selenomethionine
 FS STEREOSEARCH
 MF C5 H11 N O2 Se
 LC STN Files: BEILSTEIN*, BIOSIS, CA, CAPLUS, CASREACT, CHEMINFORMRX,
 TOXCENTER
 (*File contains numerically searchable property data)

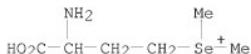
Absolute stereochemistry.



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

31 REFERENCES IN FILE CA (1907 TO DATE)
 31 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L5 ANSWER 13 OF 18 REGISTRY COPYRIGHT 2009 ACS on STN
 RN 7728-97-4 REGISTRY
 ED Entered STN: 16 Nov 1984
 CN Selenonium, (3-amino-3-carboxypropyl)dimethyl- (CA INDEX NAME)
 OTHER NAMES:
 CN Methylselenomethionine
 CN Se-Methylselenomethionine
 MF C6 H14 N O2 Se
 CI COM
 LC STN Files: AGRICOLA, ANABSTR, BIOSIS, CA, CAPLUS, TOXCENTER



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

15 REFERENCES IN FILE CA (1907 TO DATE)
15 REFERENCES IN FILE CAPLUS (1907 TO DATE)

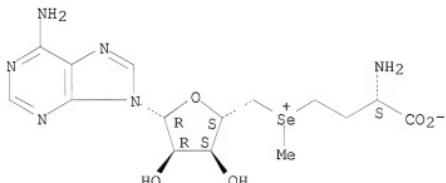
L5 ANSWER 14 OF 18 REGISTRY COPYRIGHT 2009 ACS on STN
RN 7246-06-2 REGISTRY
ED Entered STN: 16 Nov 1984
CN Butanoic acid, 2-amino-4-(methylseleno-75Se)- (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN Butyric acid, 2-amino-4-(methylselenyl-75Se)- (7CI, 8CI)
OTHER NAMES:
CN DL-Selenomethionine-75Se
CN Selenomethionine labeled with selenium-75
CN Selenomethionine-75Se
DR 5696-20-8, 34428-70-1
MF C5 H11 N O2 Se
LC STN Files: AGRICOLA, BIOSIS, CA, CAPLUS, CASREACT, TOXCENTER, USPATFULL



98 REFERENCES IN FILE CA (1907 TO DATE)
98 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L5 ANSWER 15 OF 18 REGISTRY COPYRIGHT 2009 ACS on STN
RN 5134-38-3 REGISTRY
ED Entered STN: 16 Nov 1984
CN Adenosine, 5'-[(3S)-3-amino-3-carboxypropyl]methylselenonio]-5'-deoxy-, inner salt (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN Selenomethionine, Se-adenosyl- (6CI, 7CI, 8CI)
OTHER NAMES:
CN Adenosylselenomethionine
FS STEREOSEARCH
MF C15 H22 N6 O5 Se
LC STN Files: ANABSTR, BIOSIS, CA, CAPLUS, CASREACT, MEDLINE, TOXCENTER

Absolute stereochemistry.



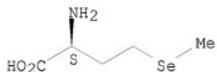
PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

15 REFERENCES IN FILE CA (1907 TO DATE)
15 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L5 ANSWER 16 OF 18 REGISTRY COPYRIGHT 2009 ACS on STN

RN 3211-76-5 REGISTRY
 ED Entered STN: 16 Nov 1984
 CN Butanoic acid, 2-amino-4-(methylseleno)-, (2S)- (CA INDEX NAME)
 OTHER CA INDEX NAMES:
 CN Butanoic acid, 2-amino-4-(methylseleno)-, (S)-
 CN Butyric acid, 2-amino-4-(methylselenyl)-, L- (8CI)
 OTHER NAMES:
 CN L-Selenomethionine
 CN Seleno-L-methionine
 CN Selenomethionine
 FS STEREOSEARCH
 MF C5 H11 N O2 Se
 CI COM
 LC STN Files: ADISNEWS, AGRICOLA, ANABSTR, AQUIRE, BEILSTEIN*, BIOSIS,
 BIOTECHNO, CA, CAPLUS, CASREACT, CHEMCATS, CHEMINFORMRX, CHEMLIST, CIN,
 CSCHEM, EMBASE, IPA, PHAR, PROMT, RTECS*, SPECINFO, TOXCENTER, USPAT2,
 USPATFULL
 (*File contains numerically searchable property data)

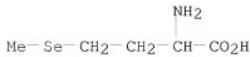
Absolute stereochemistry.



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

875 REFERENCES IN FILE CA (1907 TO DATE)
22 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
880 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L5 ANSWER 17 OF 18 REGISTRY COPYRIGHT 2009 ACS on STN
 RN 1464-42-2 REGISTRY
 ED Entered STN: 16 Nov 1984
 CN Butanoic acid, 2-amino-4-(methylseleno)- (CA INDEX NAME)
 OTHER CA INDEX NAMES:
 CN Butyric acid, 2-amino-4-(methylselenyl)- (6CI, 8CI)
 OTHER NAMES:
 CN (+/-)-Selenomethionine
 CN 2-Amino-4-(methylseleno)butyric acid
 CN 2-Amino-4-(methylselenyl)butyric acid
 CN dl-Selenomethionine
 CN DL-Selenomethionine
 CN Selenium methionine
 CN Seleno-DL-methionine
 CN Selenomethionine
 DR 2578-28-1
 MF C5 H11 N O2 Se
 CI COM
 LC STN Files: ADISNEWS, AGRICOLA, ANABSTR, AQUIRE, BEILSTEIN*, BIOSIS,
 BIOTECNO, CA, CABAB, CAPLUS, CASREACT, CBNB, CHEMCATS, CHEMINFORMRX,
 CHEMLIST, CIN, CSCHEM, CSNB, DDFU, DRUGU, EMBASE, HSDB*, IPA, MEDLINE,
 MRCK*, MSDS-OHS, PHAR, PROMT, RTECS*, SPECINFO, TOXCENTER, USAN, USPAT2,
 USPATFULL, VETU
 (*File contains numerically searchable property data)
 Other Sources: EINECS**
 (**Enter CHEMLIST File for up-to-date regulatory information)

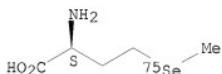


PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

1218 REFERENCES IN FILE CA (1907 TO DATE)
 17 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
 1222 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L5 ANSWER 18 OF 18 REGISTRY COPYRIGHT 2009 ACS on STN
 RN 1187-56-0 REGISTRY
 ED Entered STN: 16 Nov 1984
 CN Butanoic acid, 2-amino-4-(methylseleno-75Se)-, (2S)- (9CI) (CA INDEX NAME)
 OTHER CA INDEX NAMES:
 CN Butanoic acid, 2-amino-4-(methylseleno-75Se)-, (S)-
 CN Butyric acid, 2-amino-4-(methylselenyl-75Se)-, L- (8CI)
 OTHER NAMES:
 CN L-Selenomethionine-75Se
 CN L-[75Se]-Selenomethionine
 CN Selenomethionine (75Se)
 CN Sethotope
 CN [75Se]-L-Selenomethionine
 FS STEREOSEARCH
 MF C5 H11 N O2 Se
 CI COM
 LC STN Files: AGRICOLA, BIOSIS, BIOTECHNO, CA, CAPLUS, CASREACT, EMBASE,
 IFICDB, IFIPAT, IFIUDB, IPA, MRCK*, TOXCENTER, USAN, USPATFULL
 (File contains numerically searchable property data)
 Other Sources: WHO

Absolute stereochemistry.



57 REFERENCES IN FILE CA (1907 TO DATE)
 1 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
 57 REFERENCES IN FILE CAPLUS (1907 TO DATE)

```
=> e acetyl selenomethionine
E1      1      ACETYLSELENOL/BI
E2      1      ACETYLSELENOLCHOLINE/BI
E3      0 --> ACETYLSELENOMETHIONINE/BI
E4      1      ACETYLSELENON/BI
E5      1      ACETYLSELENONIUM/BI
E6      13     ACETYLSELENOPHEN/BI
E7      2      ACETYLSELENOSEMI/BI
E8      2      ACETYLSELENOSEMICARBAZ/BI
E9      2      ACETYLSELENOSEMICARBAZIDE/BI
E10     1      ACETYLSELENOUREA/BI
E11     1      ACETYLSELIN/BI
E12     8      ACETYLSEMI/BI
```

=> selenoacetyl methionine

SELENOACETYL METHIONINE IS NOT A RECOGNIZED COMMAND
The previous command name entered was not recognized by the system.
For a list of commands available to you in the current file, enter
"HELP COMMANDS" at an arrow prompt (=).

```
=> e selenoacetylmethionine
E1          4      SELENOACETYL/BI
E2          3      SELENOACETYLENE/BI
E3          0 --> SELENOACETYL METHIONINE/BI
E4          1      SELENOACROLEIN/BI
E5          1      SELENOADAMANTANE/BI
E6          1      SELENOADENOSIN/BI
E7          4      SELENOADENOSINE/BI
E8          10     SELENOADENYL/BI
E9          10     SELENOADENYLYL/BI
E10         1      SELENOAL/BI
E11         2      SELENOALDEHYD/BI
E12         2      SELENOALDEHYDATO/BI
```

=> logoff

ALL L# QUERIES AND A

LOGOFF? (Y)/N/HOLD:Y

| COST IN U.S. DOLLARS | SINCE FILE
ENTRY | TOTAL
SESSION
COST |
|----------------------|---------------------|--------------------------|
| FULL ESTIMATED COST | 47.53 | 320.88 |

STN INTERNATIONAL LOGOEE AT 15:19:13 ON 11 FEB 2008

Connecting via Winsock to STN

Welcome to STN International! Enter x:y

LOGINID:ssptacrs1614

PASSWORD:

TERMINAL (ENTER 1, 2, 3, OR ?):?

NEWS 12 FEB 02 for CERAB, COMPUBAB, ELCOM, and SOLIDSTATE
NEWS 13 FEB 06 GENBANK enhanced with SET PLURALS and SET SPELLING
NEWS 14 FEB 10 Patent sequence location (PSL) data added to USGENE
NEWS 15 FEB 11 COMPENDEX reloaded and enhanced
NEWS 15 FEB 11 WTEXTILES reloaded and enhanced

NEWS EXPRESS JUNE 27 08 CURRENT WINDOWS VERSION IS V8.3,
AND CURRENT DISCOVER FILE IS DATED 23 JUNE 2008.

NEWS HOURS STN Operating Hours Plus Help Desk Availability
NEWS LOGIN Welcome Banner and News Items
NEWS IPC8 For general information regarding STN implementation of IPC 8

Enter NEWS followed by the item number or name to see news on that specific topic.

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FILE 'HOME' ENTERED AT 15:14:04 ON 11 FEB 2009

=> file registry
COST IN U.S. DOLLARS

| | SINCE FILE | TOTAL |
|-----------------------------|------------|---------|
| | ENTRY | SESSION |
| FULL, ESTIMATED COST | 0.22 | 0.22 |

FILE 'REGISTRY' ENTERED AT 15:14:12 ON 11 FEB 2009
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.
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STRUCTURE FILE UPDATES: 10 FEB 2009 HIGHEST RN 1104141-78-7
DICTIONARY FILE UPDATES: 10 FEB 2009 HIGHEST RN 1104141-78-7

New CAS Information Use Policies; enter HELP USAGETERMS for details

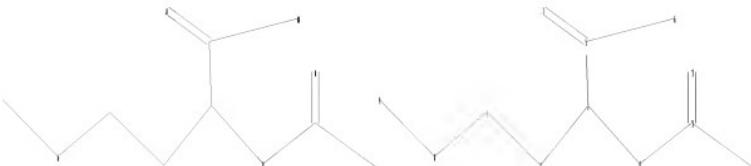
TSCA INFORMATION NOW CURRENT THROUGH July 5, 2008

Please note that search-term pricing does apply when conducting SmartSELECT searches.

REGISTRY includes numerically searchable data for experimental and predicted properties as well as tags indicating availability of experimental property data in the original document. For information on property searching in REGISTRY, refer to:

<http://www.cas.org/support/stndgen/stndoc/properties.html>

=> Uploading C:\Program Files\STNEXP\Queries\10536777z.str



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chain nodes :
1 2 3 4 5 6 7 8 9 10 11 12 13
chain bonds :
1-2 1-8 2-3 3-4 3-5 4-11 5-6 5-7 8-9 10-10 10-10 11-12 11-13
exact/norm bonds :
1-8 3-4 4-11 8-9 11-13
exact bonds :
1-2 2-3 3-5 10-10 10-10 11-12
normalized bonds :
5-6 5-7

Match level :
1:CLASS 2:CLASS 3:CLASS 4:CLASS 5:CLASS 6:CLASS 7:CLASS 8:CLASS 9:CLASS
10:CLASS 11:CLASS 12:CLASS 13:CLASS

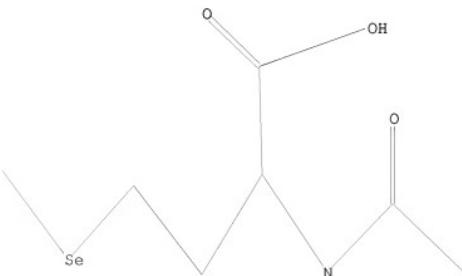
```

L1 STRUCTURE UPLOADED

```

=> d 11
L1 HAS NO ANSWERS
L1                    STR

```



Structure attributes must be viewed using STN Express query preparation.

=> s 11 fam ful

FULL SEARCH INITIATED 15:14:42 FILE 'REGISTRY'
FULL SCREEN SEARCH COMPLETED - 22 TO ITERATE

100.0% PROCESSED 22 ITERATIONS 0 ANSWERS
SEARCH TIME: 00.00.01

L2 0 SEA FAM FUL L1

=> s 11 fam ful
FULL SEARCH INITIATED 15:14:50 FILE 'REGISTRY'
FULL SCREEN SEARCH COMPLETED - 22 TO ITERATE

100.0% PROCESSED 22 ITERATIONS 0 ANSWERS
SEARCH TIME: 00.00.01

L3 0 SEA FAM FUL L1

=> end
ALL L# QUERIES AND ANSWER SETS ARE DELETED AT LOGOFF
LOGOFF? (Y)/N/HOLD:y

| COST IN U.S. DOLLARS | SINCE FILE ENTRY | TOTAL SESSION |
|----------------------|------------------|---------------|
| FULL ESTIMATED COST | 146.66 | 146.88 |

STN INTERNATIONAL LOGOFF AT 15:15:08 ON 11 FEB 2009

Connecting via Winsock to STN

Welcome to STN International! Enter x:X

LOGINID:ssptacrs1614

PASSWORD:

TERMINAL (ENTER 1, 2, 3, OR ?):2

* * * * * * * * * * Welcome to STN International * * * * * * * * *

| | |
|----------------|---|
| NEWS 1 | Web Page for STN Seminar Schedule - N. America |
| NEWS 2 NOV 21 | CAS patent coverage to include exemplified prophetic substances identified in English-, French-, German-, and Japanese-language basic patents from 2004-present |
| NEWS 3 NOV 26 | MARPAT enhanced with FSORT command |
| NEWS 4 NOV 26 | CHEMSAFE now available on STN Easy |
| NEWS 5 NOV 26 | Two new SET commands increase convenience of STN searching |
| NEWS 6 DEC 01 | ChemPort single article sales feature unavailable |
| NEWS 7 DEC 12 | GBFULL now offers single source for full-text coverage of complete UK patent families |
| NEWS 8 DEC 17 | Fifty-one pharmaceutical ingredients added to PS |
| NEWS 9 JAN 06 | The retention policy for unread STNmail messages will change in 2009 for STN-Columbus and STN-Tokyo |
| NEWS 10 JAN 07 | WPIDS, WFINDEX, and WPIX enhanced Japanese Patent Classification Data |
| NEWS 11 FEB 02 | Simultaneous left and right truncation (SLART) added for CERAB, COMPUAAB, ELCOM, and SOLIDSTATE |
| NEWS 12 FEB 02 | GENBANK enhanced with SET PLURALS and SET SPELLING |

NEWS 13 FEB 06 Patent sequence location (PSL) data added to USGENE
NEWS 14 FEB 10 COMPENDEX reloaded and enhanced
NEWS 15 FEB 11 WTEXTILES reloaded and enhanced

NEWS EXPRESS JUNE 27 08 CURRENT WINDOWS VERSION IS V8.3,
AND CURRENT DISCOVER FILE IS DATED 23 JUNE 2008.

NEWS HOURS STN Operating Hours Plus Help Desk Availability
NEWS LOGIN Welcome Banner and News Items
NEWS IPC8 For general information regarding STN implementation of IPC 8

Enter NEWS followed by the item number or name to see news on that specific topic.

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FILE 'HOME' ENTERED AT 15:19:07 ON 11 FEB 2009

```

=> file registry
COST IN U.S. DOLLARS          SINCE FILE      TOTAL
                                ENTRY           SESSIONS
FULL ESTIMATED COST          -0.22           0.22

```

FILE 'REGISTRY' ENTERED AT 15:19:18 ON 11 FEB 2009
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STRUCTURE FILE UPDATES: 10 FEB 2009 HIGHEST RN 1104141-78-7
DICTIONARY FILE UPDATES: 10 FEB 2009 HIGHEST RN 1104141-78-7

New CAS Information Use Policies; enter HELP USAGETERMS for details.

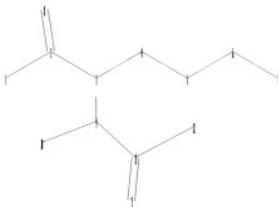
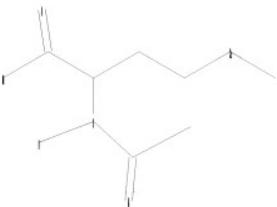
TSCA INFORMATION NOW CURRENT THROUGH July 5, 2008.

Please note that search-term pricing does apply when conducting Smart SELECT searches.

REGISTRY includes numerically searchable data for experimental and predicted properties as well as tags indicating availability of experimental property data in the original document. For information on property searching in REGISTRY, refer to:

<http://www.cas.org/support/stn/gen/stndoc/properties.html>

=> Uploading C:\Program Files\STNEXP\Queries\10536777v.str



```
chain nodes :
1 2 3 4 5 6 7 8 9 10 11 12 13
chain bonds :
1-2 2-3 2-8 3-4 3-9 4-5 5-6 6-7 9-10 9-11 11-12 11-13
exact/norm bonds :
3-9 5-6 6-7 9-11 11-13
exact bonds :
2-3 3-4 4-5 9-10 11-12
normalized bonds :
1-2 2-8

Match level :
1:CLASS 2:CLASS 3:CLASS 4:CLASS 5:CLASS 6:CLASS 7:CLASS 8:CLASS 9:CLASS
10:CLASS 11:CLASS 12:CLASS 13:CLASS
```

L1 STRUCTURE UPLOADED

```
=> s 11 sss ful
FULL SEARCH INITIATED 15:19:31 FILE 'REGISTRY'
FULL SCREEN SEARCH COMPLETED -       130 TO ITERATE
```

```
100.0% PROCESSED       130 ITERATIONS                           24 ANSWERS
SEARCH TIME: 00.00.01
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L2 24 SEA SSS FUL L1

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=> s 11 fam ful
FULL SEARCH INITIATED 15:19:35 FILE 'REGISTRY'
FULL SCREEN SEARCH COMPLETED -       22 TO ITERATE
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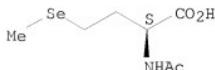
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L3 2 SEA FAM FUL L1

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L3       ANSWER 1 OF 2    REGISTRY   COPYRIGHT 2009 ACS on STN
RN     210910-25-1    REGISTRY
ED     Entered STN: 06 Sep 1998
CN     Butanoic acid, 2-(acetylamino)-4-(methylseleno)-, (2S)- (CA INDEX NAME)
FS     STEREOSEARCH
MF     C7 H13 N O3 Se
SR     CA
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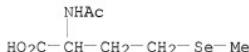
LC STN Files: CA, CAPLUS, CHEMCATS, TOXCENTER, USPAT2, USPATFULL
Absolute stereochemistry.



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

3 REFERENCES IN FILE CA (1907 TO DATE)
3 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L3 ANSWER 2 OF 2 REGISTRY COPYRIGHT 2009 ACS on STN
RN 174463-50-4 REGISTRY
ED Entered STN: 22 Mar 1996
CN Butanoic acid, 2-(acetylamino)-4-(methylseleno)- (CA INDEX NAME)
MF C7 H13 N O3 Se
SR CA
LC STN Files: CA, CAPLUS, CASREACT, CHEMCATS



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

2 REFERENCES IN FILE CA (1907 TO DATE)
2 REFERENCES IN FILE CAPLUS (1907 TO DATE)

| => file caplus | SINCE FILE | TOTAL |
|----------------------|------------|---------|
| COST IN U.S. DOLLARS | ENTRY | SESSION |
| FULL ESTIMATED COST | 262.83 | 263.05 |

FILE 'CAPLUS' ENTERED AT 15:20:02 ON 11 FEB 2009
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FILE COVERS 1907 - 11 Feb 2009 VOL 150 ISS 7
FILE LAST UPDATED: 10 Feb 2009 (20090210/ED)

Caplus now includes complete International Patent Classification (IPC)

reclassification data for the third quarter of 2008.
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<http://www.cas.org/legal/infopolicy.html>

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=> s 11
REGISTRY INITIATED
Substance data SEARCH and crossover from CAS REGISTRY in progress...
Use DISPLAY HITSTR (or FHITSTR) to directly view retrieved structures.

SAMPLE SEARCH INITIATED 15:20:11 FILE 'REGISTRY'
SAMPLE SCREEN SEARCH COMPLETED - 7 TO ITERATE

100.0% PROCESSED 7 ITERATIONS 2 ANSWERS
SEARCH TIME: 00.00.01

FULL FILE PROJECTIONS: ONLINE **COMPLETE**
BATCH **COMPLETE**
PROJECTED ITERATIONS: 7 TO 298
PROJECTED ANSWERS: 2 TO 124

L4 2 SEA SSS SAM L1

L5 3 L4

=> file caplus
COST IN U.S. DOLLARS SINCE FILE TOTAL
FULL ESTIMATED COST ENTRY SESSION
0.50 264.53

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FILE COVERS 1907 - 11 Feb 2009 VOL 150 ISS 7
FILE LAST UPDATED: 10 Feb 2009 (20090210/ED)

Caplus now includes complete International Patent Classification (IPC) reclassification data for the third quarter of 2008.

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This file contains CAS Registry Numbers for easy and accurate substance identification.

=> s 12
L6 26 L2
> d 16 ibib abs 1-26

L6 ANSWER 1 OF 26 CAPLUS COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER: 2008:330312 CAPLUS
DOCUMENT NUMBER: 148:444051
TITLE: On-Virus Construction of Polyvalent Glycan Ligands for Cell-Surface Receptors
AUTHOR(S): Kaltgrad, Eiton; O'Reilly, Mary K.; Liao, Liang; Han, Shoufa; Paulson, James C.; Finn, M. G.
CORPORATE SOURCE: Department of Chemistry and The Skaggs Institute for Chemical Biology and Departments of Chemical Physiology and Molecular Biology, The Scripps Research Institute, La Jolla, CA, 92037, USA
SOURCE: Journal of the American Chemical Society (2008), 130(14), 4578-4579
CODEN: JACSAT; ISSN: 0002-7863
PUBLISHER: American Chemical Society
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 148:444051
AB Glycans arrayed on the exterior of virus particles were used as substrates for glycosyltransferase reactions to build di- and trisaccharides from the virus surface. The resulting particles exhibited tight and specific assocns. with cognate receptors on beads and cells, in one example defeating in cis cell-surface interactions in a manner characteristic of polyvalent binding. Combined with the ability of viruses to provide structurally well-defined attachment points, the methodol. provides a convenient and powerful way to prepare complex carbohydrate ligands for clustered receptors.
REFERENCE COUNT: 30 THERE ARE 30 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L6 ANSWER 2 OF 26 CAPLUS COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER: 2008:280755 CAPLUS
DOCUMENT NUMBER: 148:419751
TITLE: Unnatural Amino Acid Incorporation into Virus-Like Particles
AUTHOR(S): Strable, Erica; Prasuhn, Duane E.; Udit, Andrew K.; Brown, Steven; Link, A. James; Ngo, John T.; Lander, Gabriel; Quispe, Joel; Potter, Clinton S.; Carragher, Bridget; Tirrell, David A.; Finn, M. G.
CORPORATE SOURCE: Department of Chemistry and The Skaggs Institute of Chemical Biology, and National Resource for Automated Molecular Microscopy and Department of Cell Biology, The Scripps Research Institute, La Jolla, CA, 92037, USA
SOURCE: Bioconjugate Chemistry (2008), 19(4), 866-875
CODEN: BCCHES; ISSN: 1043-1802
PUBLISHER: American Chemical Society
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 148:419751

AB Virus-like particles composed of hepatitis B virus (HBV) or bacteriophage Q β capsid proteins have been labeled with azide- or alkyne-containing unnatural amino acids by expression in a methionine auxotrophic strain of *E. coli*. The substitution does not affect the ability of the particles to self-assemble into icosahedral structures indistinguishable from native forms. The azide and alkyne groups were addressed by Cu(I)-catalyzed [3 + 2] cycloaddn.: HBV particles were decomposed by the formation of more than 120 triazole linkages per capsid in a location-dependent manner, whereas Q β suffered no such instability. The marriage of these well-known techniques of sense-codon reassignment and bioorthogonal chemical coupling provides the capability to construct polyvalent particles displaying a wide variety of functional groups with near-perfect control of spacing.

REFERENCE COUNT: 94 THERE ARE 94 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L6 ANSWER 3 OF 26 CAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 2008:121591 CAPLUS

DOCUMENT NUMBER: 148:215328

TITLE: Preparation of novel selenoamino acid-containing dipeptides with enhanced bioavailability in pharmaceutical and cosmetic applications

INVENTOR(S): Majeed, Muhammed; Nagabhushanam, Kalyanam; Ramanujam, Rajendran; Chandramouli, Renukeshwar H.

PATENT ASSIGNEE(S): USA

SOURCE: U.S. Pat. Appl. Publ., 26pp.

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|------------------------|------|----------|-----------------|------------|
| US 20080026017 | A1 | 20080131 | US 2007-749184 | 20070516 |
| PRIORITY APPLN. INFO.: | | | US 2006-767528P | P 20060518 |

OTHER SOURCE(S): CASREACT 148:215328

AB The invention relates to peptides in which L-selenomethionine or Se-methyl-L-selenocysteine is linked to L-glutamic acid or other amino acids. The peptides exhibit (i) enhanced water solubility, (ii) enhanced rate of dissolv. in water, (iii) enhanced bioavailability, (iv) excellent vascular endothelial growth factor (VEGF)-promoting activity, (v) excellent anti-5- α -reductase activity, (vi) and capability to prevent/reduce hair loss and promote hair growth. Cosmetic and pharmaceutical compns. comprising the isomeric peptides are also disclosed. Thus, γ -L-glutamyl-Se-methyl-L-selenocysteine was prepared by reaction of N-phthaloyl-L-glutamic anhydride (synthesis given) with Se-methyl-L-selenocysteine, followed by hydrazinolysis. VEGF-promoting and anti-5- α -reductase activities by dipeptides of the invention are tabulated.

L6 ANSWER 4 OF 26 CAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 2007:474644 CAPLUS

DOCUMENT NUMBER: 147:26400

TITLE: Standardized identification of selenocystathione and its γ -glutamyl derivatives in monkeypot nuts by 3D liquid chromatography with ICP-MS detection followed by nanoHPLC-Q-TOF-MS/MS

AUTHOR(S): Dernovics, Mihaly; Garcia-Barrera, Tamara; Bierla, Katarzyna; Preud'homme, Hugues; Lobinski, Ryszard

CORPORATE SOURCE: Equipe de Chimie Analytique Bio-inorganique, CNRS UMR 5034, Pau, F-64053, Fr.

SOURCE: Analyst (Cambridge, United Kingdom) (2007), 132(5),

PUBLISHER: Royal Society of Chemistry
 DOCUMENT TYPE: Journal
 LANGUAGE: English

AB A three-step chromatog. procedure using orthogonal separation mechanisms (size-exclusion, cation-exchange and ion-pairing reversed phase) was developed to purify three low mol. weight selenospecies, including the major compound, from the aqueous extract of monkeypot (*Lecythis minor*) nuts. The following reversed-phase nanoHPLC-electrospray Q-TOF-MS/MS allowed the formal standardless identification of selenocystathionine and two isoforms of γ -glutamyl-selenocystathionine. This is the first MS and MS/MS-based formal evidence of the presence of these compds. in a biol. sample.

REFERENCE COUNT: 43 THERE ARE 43 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L6 ANSWER 5 OF 26 CAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 2007:380716 CAPLUS

DOCUMENT NUMBER: 1461:357736

TITLE: Production of organic and inorganic selenium compounds by lactic acid bacteria

INVENTOR(S): Teo, Alex Yeow-Lim; Hon, Sook-Mei; Se, Chea-Yun; Ian, Hui Meng

PATENT ASSIGNEE(S): Singapore

SOURCE: U.S. Pat. Appl. Publ., 10pp.

CODEN: USXKCO

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|------|----------|-----------------|----------|
| US 20070077238 | A1 | 20070405 | US 2005-243391 | 20051004 |
| WO 2007044340 | A2 | 20070419 | WO 2006-US38652 | 20061004 |
| WO 2007044340 | A3 | 20080502 | | |
| W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH,
CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, ES, EG, ES, FI, GB, GD,
GE, GH, GM, HN, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP,
KR, KZ, LA, LC, LK, LR, LS, LT, LU, LV, LX, MA, MD, MG, MK, MN,
MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RS,
RU, SC, SD, SE, SG, SK, SL, SM, SV, SY, TJ, TM, TN, TR, TT, TZ,
UA, UG, US, UZ, VC, VN, ZA, ZM, ZW | | | | |
| RM: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE,
IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ,
CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH,
GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY,
KG, KZ, MD, RU, TJ, TM, AP, EA, EP, OA | | | | |
| EP 1942915 | A2 | 20080716 | EP 2006-836172 | 20061004 |
| R: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE,
IS, IT, LI, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR, AL,
BA, HR, MK, RS | | | | |

PRIORITY APPLN. INFO.: US 2005-243391 A 20051004
 WO 2006-US38652 W 20061004

AB A novel strain of lactic acid bacteria was found to be heat resistant and able to grow in a sulfur-limiting medium (SLM) containing a high concentration of sodium selenite. The microorganism is a non-spore forming and Gram-pos. coccus, which is identified with >90% confidence using the API biochem. and sugar fermentation tests, ribotyping and 16S rRNA sequencing as *Pediococcus pentosaceus* SP80. In the current study, *P. pentosaceus* SP80 grown on SLM

containing 250 ppm sodium selenite produced both organic and inorg. forms of selenium. These selenium compds. can be separated using an anion exchange chromatog. technique. The concns. of selenium detected in the organic and inorg. fractions were 4.34 and 21.7 ppm, resp. Selenium-enriched bacteria are useful as a source of selenium for supplementing the diets of animals and humans. Animals fed efficacious amt. of the selenium-enriched bacteria show improved feed conversion rates and higher levels of glutathione peroxidase (GPx) activity in heart, kidney and liver tissues indicating an increased absorption and retention of selenium over control diets.

L6 ANSWER 6 OF 26 CAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 2007:63602 CAPLUS

DOCUMENT NUMBER: 146:143001

TITLE: Preparation of seleno amino acids as enhanced bioavailable sources of selenium in animal diets
 INVENTOR(S): Abdel-Moneim, Mahmoud M.; Anderson, Michael D.
 PATENT ASSIGNEE(S): Zinpro Corporation, USA
 SOURCE: U.S. Pat. Appl. Publ., 8pp.

CODEN: USXKCO

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|------|----------|------------------|------------|
| US 20070015829 | A1 | 20070118 | US 2005-181264 | 20050714 |
| AU 2006270349 | A1 | 20070125 | AU 2006-270349 | 20060706 |
| CA 2614479 | A1 | 20070125 | CA 2006-2614479 | 20060706 |
| WO 2007011563 | A1 | 20070125 | WO 2006-US26652 | 20060706 |
| W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HN, HR, HU, ID, IL, IN, IS, JE, KE, KG, KM, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LV, LY, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW | | | | |
| RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM | | | | |
| EP 1902020 | A1 | 20080326 | EP 2006-786713 | 20060706 |
| R: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LI, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR | | | | |
| MX 200800498 | A | 20080512 | MX 2008-498 | 20080110 |
| CN 101223134 | A | 20080716 | CN 2006-80025742 | 20080114 |
| KR 2008026655 | A | 20080325 | KR 2008-703616 | 20080214 |
| US 20080311277 | A1 | 20081218 | US 2008-195155 | 20080820 |
| PRIORITY APPLN. INFO.: | | | US 2005-181264 | A 20050714 |
| | | | WO 2006-US26652 | W 20060706 |

OTHER SOURCE(S): CASREACT 146:143001; MARPAT 146:143001

AB The invention relates to novel derivs. of seleno amino acids, particularly selenomethionine, that are effective dietary sources of supplemental selenium in humans and livestock. The novel derivs. have improved phys., chemical or biol. properties over the parent seleno amino acid. Thus, N-succinyl-L-selenomethionine was prepared and shown to be a more bioavailable source of dietary selenium than sodium selenite in lactating cows.

L6 ANSWER 7 OF 26 CAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 2006:1124498 CAPLUS
 DOCUMENT NUMBER: 145:437641
 TITLE: Compositions containing Allium sativum linn. (garlic) naturally enriched with organic selenium compounds for nutritional supplementation
 INVENTOR(S): Majeed, Muhammed; Bammi, Rajinder Kumar; Badmaev, Vladimir; Prakash, Subbalakshmi; Nagabhushanam, Kalyanam
 PATENT ASSIGNEE(S): USA
 SOURCE: U.S. Pat. Appl. Publ., 4pp., Cont.-in-part of U.S. Ser. No. 605,578.
 CODEN: USXXCO
 DOCUMENT TYPE: Patent
 LANGUAGE: English
 FAMILY ACC. NUM. COUNT: 2
 PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|------|-----------------|-----------------|----------|
| US 20060240126 | A1 | 20061026 | US 2005-164787 | 20051206 |
| US 7014874 | B1 | 20060321 | US 2003-605578 | 20031009 |
| AU 2006321973 | A1 | 20070614 | AU 2006-321973 | 20061206 |
| WO 2007067600 | A2 | 20070614 | WO 2006-US46519 | 20061206 |
| WO 2007067600 | A3 | 20070726 | | |
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| RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AP, EA, EP, OA | | | | |
| EP 1968620 | A2 | 20080917 | EP 2006-839082 | 20061206 |
| R: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LI, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR | | | | |
| PRIORITY APPLN. INFO.: | | | | |
| | | US 2003-605578 | A2 | 20031009 |
| | | US 2003-249239 | A2 | 20030325 |
| | | US 2003-367274P | P | 20030326 |
| | | US 2005-164787 | A | 20051206 |
| | | WO 2006-US46519 | W | 20061206 |

AB The invention discloses selenium enriched garlic compns. that are a safe and efficacious means of providing supplemental ants. of the essential trace mineral nutrient selenium, to humans and animals. An example is give for preparation of a composition containing selectively fractionated bioactive organic

Se compds. from Se-enriched Allium sativum. The concentrate contained Se compds. such a methylselenic acid, allyl selenocysteine,, and L-selenomethionine.

L6 ANSWER 8 OF 26 CAPLUS COPYRIGHT 2009 ACS on STN
 ACCESSION NUMBER: 2006:1092839 CAPLUS
 DOCUMENT NUMBER: 146:137842
 TITLE: Selenomethionine Extraction from Selenized Yeast: an LC-MS Study of the Acid Hydrolysis of a Synthetic Selenopeptide
 AUTHOR(S): McSheehy, Shona; Yang, Lu; Mester, Zoltan
 CORPORATE SOURCE: Institute for National Measurement Standards, National Research Council of Canada, Ottawa, ON, K1A 0R9, Can.

SOURCE:

Microchimica Acta (2006), 155(3-4), 373-377

PUBLISHER:

CODEN: MIACAQ; ISSN: 0026-3672
Springer Wien

DOCUMENT TYPE:

Journal

LANGUAGE:

English

AB A synthetically prepared seleno-peptide (AHPDVLTVXLQMLDDGR) was used as a model system for the acid hydrolysis of selenized yeast proteins. The seleno-peptide is a tryptic peptide of a heat shock protein 104 from *Saccharomyces cerevisiae*, was subjected to acid hydrolysis using methanesulfonic acid over a time period of 8 h. Aliquots of the solution were sub-sampled at predetd. time intervals and the peptide fragments characterized by reversed phase LC MSn. Similarly, the appearance of amino acid residues in the solution was monitored. After about 8 h the synthetic peptide completely hydrolyzed. The use of a selenopeptide as a model for hydrolysis of selenized yeast hydrolysis was validated by comparing the decomposition time profile of the synthetic peptide with that of a selenized yeast sample. The rate of hydrolysis was identical in both systems, suggesting that the employed acid hydrolysis yields to the complete decomposition of the Se containing proteins in yeast and consequently to the liberation of selenomethionine.

REFERENCE COUNT: 8 THERE ARE 8 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L6 ANSWER 9 OF 26 CAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 2006:265217 CAPLUS
DOCUMENT NUMBER: 144:318477

TITLE: Compositions and methods containing *Allium sativum* Linn. (garlic) naturally enriched with organic selenium compounds for nutritional supplementation
INVENTOR(S): Majeed, Muhammed; Bammi, Rajinder Kumar; Badmaev, Vladimir; Prakash, Subbalakshmi; Kalyanam, Nagabhushanam

PATENT ASSIGNEE(S): Sami Labs Limited, India
SOURCE: U.S., 11 pp., Cont.-in-part of U.S. Ser. No. 249,239.
CODEN: USXXAM

DOCUMENT TYPE: Patent
LANGUAGE: English

FAMILY ACC. NUM. COUNT: 2

PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|------------------------|------|----------|-----------------|-------------|
| US 7014874 | B1 | 20060321 | US 2003-605578 | 20031009 |
| IN 2004CH00210 | A | 20051202 | IN 2004-CH210 | 20040310 |
| US 20060240126 | A1 | 20061026 | US 2005-164787 | 20051206 |
| PRIORITY APPLN. INFO.: | | | US 2003-249239 | A2 20030325 |
| | | | US 2003-367274P | P 20030326 |
| | | | US 2003-605578 | A 20031009 |

AB The invention discloses a method to prepare concs. from *Allium sativum* Linn. (garlic) bulbs naturally enriched with an unique composition of organic selenium

compds. and the use of such concs. in nutritional supplement compns. for human and animal use. The resulting compns. provide a safe and efficacious means of providing supplemental amts. of the essential trace mineral nutrient selenium for diverse health benefits. For example, 100 kg of selenium-enriched garlic bulbs prepared by soilless culture technique were crushed and subjected to multistage supercrit. fluid extraction followed by chromatog. separation. High pressure carbon dioxide (10 to 60 MPa), modified with ethanol and water (50:50), was used to extract selenium-containing nonprotein amino acids as well as selenoamino acid dipeptides. These were separated and purified using preparative HPLC, the mobile phase and water were

removed by evaporation under reduced pressure and freeze drying, to yield bioactive selenoamino acid and selenoamino acid dipeptide fractions. The fractions obtained were blended with natural garlic powder to yield a composition containing 100 to 2000 ppm of selenium in the form of organic selenium compds. The composition of the selenium enrichment concentrate was configured to provide 1000 ppm organic selenium content in natural garlic powder containing 200 ppm alliin. A composition of enrichment concentrate contained N- γ (L-Glutamyl)Se-methyl-L-selenocysteine 1340 ppm, N- γ (L-Glutamyl)L-selenomethionine 40 ppm, L-Selenomethionine 125 ppm, and Se-Methyl-L-selenocysteine 1385 ppm, corresponding to 340 ppm, 10 ppm, 50 ppm, and 600 ppm elemental selenium, resp. The results of the open prospective single dose clin. study in human subjects suggest that the composition effectively reduces oxidative stress levels, and is safe for use as an antioxidant nutritional supplement.

REFERENCE COUNT: 2 THERE ARE 2 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L6 ANSWER 10 OF 26 CAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 2005:14419 CAPLUS

DOCUMENT NUMBER: 142:114471

TITLE: Preparation of glycosylated amino acids, proteins and peptides via olefin metathesis reactions

INVENTOR(S): Davis, Benjamin Guy; Kramer, Holger Bernd Ralf

PATENT ASSIGNEE(S): Isis Innovation Limited, UK

SOURCE: PCT Int. Appl., 48 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|------|----------|-----------------|----------|
| WO 2005000873 | A1 | 20050106 | WO 2004-GB2738 | 20040624 |
| W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW | | | | |
| RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG | | | | |

PRIORITY APPLN. INFO.:

GB 2003-14741 A 20030624

AB A method for the preparation of a glycosylated amino acid, protein or peptide comprises reacting an unprotected carbohydrate containing a carbon-carbon double bond (e.g., an allyl or vinyl C-glycoside) with an amino acid, a protein or a peptide containing a side-chain carbon-carbon double bond under olefin metathesis reaction conditions. The side-chain carbon-carbon double bond is introduced by (a) oxidizing the sulfur in methionine or the selenium in selenomethione or homoselemoncysteine and (b) eliminating the sulfoxide or selenoxide. Thus, 3-(α -D-glucopyranosyl)propene, prepared by pivaloylation-allylation of glucose, was reacted with vinylglycine (vG) tripeptide Ac-vG-Ser-Phe-OMe in the presence of Grubbs-Hoveyda catalyst to afford the desired cross-metathesis product in mixture with the C-glycoside homodimer byproduct.

REFERENCE COUNT: 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS

RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L6 ANSWER 11 OF 26 CAPLUS COPYRIGHT 2009 ACS on STN
 ACCESSION NUMBER: 2004:467738 CAPLUS
 DOCUMENT NUMBER: 1411:17591
 TITLE: Agent having a destructive effect on malignant tumors and method for the production
 INVENTOR(S): Groke, Karl; Herwig, Ralf
 PATENT ASSIGNEE(S): C.Y.L. Handelsges. m.b.H., Austria; Ferdinand, Peter
 SOURCE: PCT Int. Appl., 35 pp.
 CODEN: PIXXD2
 DOCUMENT TYPE: Patent
 LANGUAGE: German
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|------|----------|-----------------|------------|
| WO 2004047832 | A1 | 20040610 | WO 2003-EP50712 | 20031013 |
| W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW | | | | |
| RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG | | | | |
| AT 2002001778 | A | 20040815 | AT 2002-1778 | 20021127 |
| AT 412447 | B | 20050325 | | |
| CA 2507273 | A1 | 20040610 | CA 2003-2507273 | 20031013 |
| AU 2003285351 | A1 | 20040618 | AU 2003-285351 | 20031013 |
| EP 1565176 | A1 | 20050824 | EP 2003-778338 | 20031013 |
| EP 1565176 | B1 | 20060524 | | |
| R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK | | | | |
| JP 2006508998 | T | 20060316 | JP 2004-554531 | 20031013 |
| AT 326958 | T | 20060615 | AT 2003-778338 | 20031013 |
| PT 1565176 | T | 20061031 | PT 2003-778338 | 20031013 |
| ES 2268452 | T3 | 20070316 | ES 2003-778338 | 20031013 |
| US 20060292218 | A1 | 20061228 | US 2006-536777 | 20060907 |
| PRIORITY APPLN. INFO.: | | | AT 2002-1778 | A 20021127 |
| | | | EP 2003-778338 | A 20031013 |
| | | | WO 2003-EP50712 | W 20031013 |

AB Disclosed is an agent which has a destructive effect on malignant tumors and contains alpha-ketoglutaric acid, N-acetyl-seleno-L-methionine, N-acetyl-L-methionine, and a compound that is capable of forming azomethine and is selected among the group 5-hydroxymethylfurfural, dehydroascorbic acid, maltol, and vanillin as an active substance, 5-hydroxymethylfurfural being preferred. The inventive agent can be used in the form of an infusion, in an oral or rectal form of administration, or as an irrigation in cancer therapy. The treatment of cancer patients with the following infusion solution is reported: α -ketoglutaric acid 9.0 g/L; 5-hydroxymethyl furfural 3.0 g/L; N-acetyl-seleno-L-methionine 2.0 mg/L; N-acetyl-L-methionine 100.00 mg/L; glucose 30.0 g/L; sodium and potassium ions to set pH.

REFERENCE COUNT: 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L6 ANSWER 12 OF 26 CAPLUS COPYRIGHT 2009 ACS on STN
 ACCESSION NUMBER: 2004:37284 CAPLUS

DOCUMENT NUMBER: 140:338109
TITLE: Element selective characterization of stability and reactivity of selenium species in selenized yeast
AUTHOR(S): Uden, Peter C.; Totoe Boakye, Harriet; Kahakachchi, Chethaka; Hafezi, Rameh; Nolibos, Paula; Block, Eric; Johnson, Sherida; Tyson, Julian F.
CORPORATE SOURCE: Department of Chemistry, Lederle Graduate Research, University of Massachusetts, Amherst, MA, 01003-9336, USA
SOURCE: Journal of Analytical Atomic Spectrometry (2004), 19(1), 65-73
PUBLISHER: Royal Society of Chemistry
DOCUMENT TYPE: Journal
LANGUAGE: English

AB The concerted application of element specific atomic spectral detection for chromatog. eluent monitoring allows previously unexploited qual. and quant. anal. concepts to be developed for the determination of selenium species.

Selenium speciation is vital in order to better understand its metabolism and biol. significance in clin. chemical, biol., toxicol., and nutrition. Fluoroacid ion pair HPLC with ICP-MS detection and GC derivatization with atomic emission detection (AED) together aid anal. and elucidation of reaction pathways of selenium compds. in high selenium enriched yeast, as used widely in nutritional and clin. cancer preventative studies. Comparisons between currently produced and archived selenized yeasts show major differences in speciation. The formation of selenomethionine selenoxide and the identification of Se-S bonded S-(selenomethyl)-cysteine in archived nutritional yeast may be important for short and long term stability and nutritional activity studies.

REFERENCE COUNT: 41 THERE ARE 41 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L6 ANSWER 13 OF 26 CAPLUS COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER: 2003:465507 CAPLUS
DOCUMENT NUMBER: 139:193209
TITLE: Incorporation of selenomethionine into proteins through selenohomocysteine-mediated ligation
AUTHOR(S): Roelfes, Gerard; Hilvert, Donald
CORPORATE SOURCE: Laboratorium fur Organische Chemie Swiss Federal Institute of Technology (ETH) ETH-Honggerberg, Zurich, 8093, Switz.
SOURCE: Angewandte Chemie, International Edition (2003), 42(20), 2275-2277
PUBLISHER: Wiley-VCH Verlag GmbH & Co. KGaA
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 139:193209

AB Site-selective incorporation of selenomethionine into proteins in place of methionine provides a unique spectroscopic probe of local protein structure and dynamics. This was demonstrated with seleno-bPP 1, a synthetic variant of a peptide hormone prepared by ligation of a C-terminal peptide thioester with a peptide fragment containing an N-terminal selenohomocysteine, followed by methylation of the resulting selenol (see scheme; bPP = bovine pancreatic peptide).

REFERENCE COUNT: 23 THERE ARE 23 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L6 ANSWER 14 OF 26 CAPLUS COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER: 2002:647093 CAPLUS
DOCUMENT NUMBER: 137:324342

TITLE: Characterization of Selenium Species in Brazil Nuts by HPLC-ICP-MS and ES-MS

AUTHOR(S): Vonderheide, Anne P.; Wrobel, Kazimierz; Kannamkumarath, Sasi S.; B'Hymer, Clayton; Montes-Bayon, Maria; Ponce de Leon, Claudia; Caruso, Joseph A.

CORPORATE SOURCE: Department of Chemistry, University of Cincinnati, Cincinnati, OH, 45221-0172, USA

SOURCE: Journal of Agricultural and Food Chemistry (2002), 50(20), 5722-5728

CODEN: JAFCAU; ISSN: 0021-8561

PUBLISHER: American Chemical Society

DOCUMENT TYPE: Journal

LANGUAGE: English

AB Brazil nuts have been classified as the foodstuffs that contain the highest level of unadulterated selenium, an essential trace element that appears to prevent cancer. To date, characterization of the selenium species in Brazil nuts has not yet been investigated. In this work, various sample preparation approaches, including microwave extns. and enzymic treatments, are examined with the goal of species preservation and subsequent selenium speciation; of these approaches, an enzymic treatment with Proteinase K proved most effective. High-performance liquid chromatog. (HPLC) separation strategies and inductively coupled plasma mass spectrometry (ICP-MS) detection schemes are also considered. Extns. are evaluated against available stds. for the com. obtainable seleno-amino acids, selenomethionine (SeMet), selenoethionine (SeEt), and selenocysteine (SeCys); selenomethionine was demonstrated to be the most abundant of these seleno-amino acids. Further characterization of unidentified selenium-containing peaks was attempted by the employment of several procedures, including electrospray-mass spectrometry (ES-MS). A peptide structure was identified; however, this was considered a tentative proposal due to the large background produced by the extremely complicated Brazil nut matrix.

REFERENCE COUNT: 29 THERE ARE 29 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L6 ANSWER 15 OF 26 CAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 2000:289358 CAPLUS

DOCUMENT NUMBER: 133:88660

TITLE: Chemical speciation influences comparative activity of selenium-enriched garlic and yeast in mammary cancer prevention

AUTHOR(S): Ip, Clement; Birringer, Marc; Block, Eric; Kotrebai, Mihaly; Tyson, Julian F.; Uden, Peter C.; Lisk, Donald J.

CORPORATE SOURCE: Department of Experimental Pathology, Roswell Park Cancer Institute, Buffalo, NY, 14263, USA

SOURCE: Journal of Agricultural and Food Chemistry (2000), 48(6), 2062-2070

CODEN: JAFCAU; ISSN: 0021-8561

PUBLISHER: American Chemical Society

DOCUMENT TYPE: Journal

LANGUAGE: English

AB Daily supplementation with selenized yeast (Se-yeast) in humans can lead to decreased overall cancer morbidity and mortality by nearly 50%. Selenized garlic (Se-garlic) is effective in mammary cancer prevention in rats. Certain biol. activities of Se-garlic and Se-yeast were studied to elucidate the differences based on the chemical forms of Se found in these natural products. Characterization of organic Se compds. in yeast (1922 µg Se/g) and garlic (296 µg Se/g) was carried out by HPLC with ICP-MS or with electrospray MS. Anal. speciation studies showed that the bulk of Se in Se-garlic and Se-yeast is in the form of

γ -glutamyl-Se-methylselenocysteine (73%) and selenomethionine (85%), resp. The above methodol. has the sensitivity and capability to account for >90% of total Se. In rat feeding studies, addition of Se-garlic to the diet at different levels consistently led to lower total tissue Se accumulation when compared to Se-yeast. Se-garlic was more effective in suppressing the development of premalignant lesions and formation of adenocarcinomas in the mammary gland of female Sprague-Dawley rats treated with carcinogens (methylnitrosourea, dimethylbenz[α]anthracene).

The metabolism of selenomethionine and

γ -glutamyl-Se-methylselenocysteine is discussed in relation to their tissue deposition which may account for differences in their cancer chemopreventive activity.

REFERENCE COUNT: 35 THERE ARE 35 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L6 ANSWER 16 OF 26 CAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 2000:161317 CAPLUS

DOCUMENT NUMBER: 132:191222

TITLE: Crystal structure of farnesyl protein transferase compositions and their use for drug design

INVENTOR(S): Strickland, Corey; Weber, Patricia C.

PATENT ASSIGNEE(S): Schering Corporation, USA

SOURCE: PCT Int. Appl., 180 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|------|----------|-----------------|------------|
| WO 2000012543 | A2 | 20000309 | WO 1999-US18819 | 19990826 |
| WO 2000012543 | A3 | 20000615 | | |
| W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CZ, DE, DK, EE, ES, FI, GB, GD, GE, HR, HU, ID, IL, IN, IS, JP, KG, KR, KZ, LC, LK, LR, LT, LU, LV, MD, MG, MK, MN, MX, NO, NZ, PL, PT, RO, RU, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UZ, VN, YU, ZA | | | | |
| RW: GH, GM, KE, LS, MW, SD, SL, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG | | | | |
| AU 9956787 | A | 20000321 | AU 1999-56787 | 19990826 |
| PRIORITY APPLN. INFO.: | | | US 1998-141651 | A 19980828 |
| | | | WO 1999-US18819 | W 19990826 |

AB The present invention relates to crystalline compns. comprising rat farnesyl protein transferase polypeptides in complex with substrates and inhibitors. Atomic coordinates from x-ray diffraction and 3-dimensional structures are provided for rat farnesyl protein transferase complexed with (1) a substrate (farnesyl diphosphate, FPP) analog (α -hydroxyphosphonic acid) and a Ras model peptide (Ac-Cys-Val-Ile-Met) at 2.4 \AA resolution, (2) FPP and the inhibitor SCH66701 at 2.9 \AA resolution, (3) FPP and SCH66381 at 2.2 \AA resolution, and (4) FPP and SCH69132 at 2.5 \AA resolution. Also disclosed are crystallization conditions for these compns. and their use for structural determination of FPT:FPP/FPP analog:peptide/inhibitor complexes. Drug discovery efforts directed toward farnesyl protein transferase (FPT) inhibitors have been hampered by the lack of adequate structural information about FPT and its complex with substrates and inhibitors. Thus, the present information can be used to design more potent, selective and metabolically stable FPT inhibitors for use as drugs against cancer.

REFERENCE COUNT: 1 THERE ARE 1 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L6 ANSWER 17 OF 26 CAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 2000:98793 CAPLUS

DOCUMENT NUMBER: 132:148502

TITLE: Crystal structure of farnesyl protein transferase compositions and their use for drug design

INVENTOR(S): Strickland, Corey; Wu, Zhen; Windsor, William T.; Weber, Patricia C.

PATENT ASSIGNEE(S): Schering Corporation, USA
SOURCE: PCT Int. Appl., 165 pp.

DOCUMENT TYPE: Patent
LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|------|----------|-----------------|------------|
| WO 2000006748 | A2 | 20000210 | WO 1999-US16684 | 19990729 |
| WO 2000006748 | A3 | 20000316 | | |
| W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CZ, DE, DK, EE, ES, FI, GB, GD, GE, HR, HU, ID, IL, IN, IS, JP, KG, KR, KZ, LC, LR, LT, LU, LV, MD, MG, MK, MN, MX, NO, NZ, PL, PT, RO, RU, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UZ, VN, YU, ZA
RW: GH, GM, KE, LS, MW, SD, SL, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG | A | 20000221 | AU 1999-52257 | 19990729 |
| PRIORITY APPLN. INFO.: | | | US 1998-126163 | A 19980730 |
| | | | WO 1999-US16684 | W 19990729 |

AB The present invention relates to crystalline compns. comprising farnesyl protein transferase-like polypeptides in complex with substrates and inhibitors. Atomic coordinates from x-ray diffraction are provided for a Δ10-C-terminal deletion mutation of rat farnesyl protein transferase complexed with (1) its natural substrate (farnesyl diphosphate, FPP) or a substrate analog (α -hydroxyphosphonic acid), and (2) a Ras model peptide (Ac-Cys-Val-Ile-Met) or an inhibitor compound (SCH1180 or SCH44342). Also disclosed are crystallization conditions for these compns. and their use for structural determination of FPT:FPP/FPP analog: peptide/inhibitor complexes.

Drug discovery efforts directed toward farnesyl protein transferase (FPT) inhibitors have been hampered by the lack of adequate structural information about FPT and its complex with substrates and inhibitors. Thus, the present information can be used to design more potent, selective and metabolically stable FPT inhibitors for use as drugs against cancer.

REFERENCE COUNT: 1 THERE ARE 1 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L6 ANSWER 18 OF 26 CAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 1999:345005 CAPLUS

DOCUMENT NUMBER: 131:169442

TITLE: Identification of the principal selenium compounds in selenium-enriched natural sample extracts by ion-pair liquid chromatography with inductively coupled plasma- and electrospray ionization-mass spectrometric detection

AUTHOR(S): Kotrebai, Mihaly; Tyson, Julian F.; Uden, Peter C.; Birringer, Marc; Block, Eric

CORPORATE SOURCE: Lederle Graduate Research Tower A, Department of Chemistry, University of Massachusetts, Amherst, MA, 01003-4510, USA

SOURCE: Analytical Communications (1999), 36(6), 249-252
CODEN: ANCOCF; ISSN: 1359-7337

PUBLISHER: Royal Society of Chemistry

DOCUMENT TYPE: Journal

LANGUAGE: English

AB Selenium-enriched garlic and yeast sample exts. and digests were analyzed using ion-pair high performance liquid chromatog. (HPLC) with online inductively coupled plasma-mass spectrometric (ICP-MS) and electrospray ionization-mass spectrometric (ESI-MS) detection. The principal selenium compds. in these samples were identified as selenomethionine, and Se-adenosyl-selenohomocysteine in yeast, and γ -glutamyl-Se-methyl-selenocysteine and possibly γ -glutamyl-Se-methyl-selenomethionine in garlic. The compds. identified account for 85 and 90% of the total selenium content of the yeast and the garlic samples, resp. Online HPLC-ESI-MS selected ion chromatograms (SIC) and mass spectra of selenium compds. extracted from selenium enriched samples are presented. Limits of quantification (LOQ, defined as S/N = 10) for HPLC-ICP-MS were in the range 10-50 ng/mL Se in the injected exts. LOQ values for HPLC-ESI-MS were .apprx.100 times higher than those of HPLC-ICP-MS.

REFERENCE COUNT: 14 THERE ARE 14 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L6 ANSWER 19 OF 26 CAPLUS COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER: 1998:701644 CAPLUS
DOCUMENT NUMBER: 130:62882
TITLE: Crystal Structure of Farnesyl Protein Transferase Complexed with a CaaX Peptide and Farnesyl Diphosphate Analog

AUTHOR(S): Strickland, Corey L.; Windsor, William T.; Syto, Rosalinda; Wang, Lynn; Bond, Richard; Wu, Zhen; Schwartz, Jeffrey; Le, Hung V.; Beese, Lorena S.; Weber, Patricia C.

CORPORATE SOURCE: Structural Chemistry and Tumor Biology Departments, Schering-Plough Research Institute, Kenilworth, NJ, 07033-0539, USA

SOURCE: Biochemistry (1998), 37(47), 16601-16611
CODEN: BICHAW; ISSN: 0006-2960

PUBLISHER: American Chemical Society
DOCUMENT TYPE: Journal
LANGUAGE: English

AB The crystallog. structure of acetyl-Cys-Val-Ile-selenoMet-COOH and α -hydroxyfarnesylphosphonic acid (α HFP) complexed with rat farnesyl protein transferase (FPT) (space group P61, $a = b = 174.13 \text{ \AA}$, $c = 69.71 \text{ \AA}$, $\alpha = \beta = 90^\circ$, $\gamma = 120^\circ$, Rfactor = 21.8%, Rfree = 29.2%, 2.5 \AA resolution) is reported. In the ternary complex, the bound substrates are within van der Waals contact of each other and the FPT enzyme. α HFP binds in an extended conformation in the active-site cavity where pos. charged side chains and solvent mols. interact with the phosphate moiety and aromatic side chains pack adjacent to the isoprenoid chain. The backbone of the bound CaaX peptide adopts an extended conformation, and the side chains interact with both FPT and α HFP. The cysteine sulfur of the bound peptide coordinates the active-site zinc. Overall, peptide binding and recognition appear to be dominated by side-chain interactions. Comparison of the structures of the ternary complex and unliganded FPT [Park, H., Bodurka, S., Moomaw, J., Casey, P., and Beese, L. (1997) Science 275, 1800-1804] shows that major rearrangements of several active site side chains occur upon substrate binding.

REFERENCE COUNT: 24 THERE ARE 24 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L6 ANSWER 20 OF 26 CAPLUS COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER: 1998:485713 CAPLUS
DOCUMENT NUMBER: 129:146163
ORIGINAL REFERENCE NO.: 129:29727a,29730a
TITLE: Acylase I-catalyzed deacetylation of N-acetyl-L-cysteine and S-alkyl-N-acetyl-L-cysteines
AUTHOR(S): Uttamsingh, Vinita; Keller, D. A.; Anders, M. W.
CORPORATE SOURCE: Department of Pharmacology and Physiology, University of Rochester, Rochester, NY, 14642, USA
SOURCE: Chemical Research in Toxicology (1998), 11(7), 800-809
PUBLISHER: American Chemical Society
DOCUMENT TYPE: Journal
LANGUAGE: English
AB The aminoacylase that catalyzes the hydrolysis of N-acetyl-L-cysteine (NAC) was identified as acylase I after purification by column chromatog. and electrophoretic anal. Rat kidney cytosol was fractionated by ammonium sulfate precipitation, and the proteins were separated by ion-exchange column chromatog., gel-filtration column chromatog., and hydrophobic interaction column chromatog. Acylase activity with NAC and N-acetyl-L-methionine (NAM), a known substrate for acylase I, as substrates coeluted during all chromatog. steps. Sodium dodecyl sulfate-polyacrylamide gel electrophoresis showed that the protein was purified to near homogeneity and had a subunit Mr of 43 000, which is identical with the Mr of acylase I from porcine kidney and bovine liver. N-Butylmalonic acid was a slow-binding inhibitor of acylase I and inhibited the deacetylation of NAC with a Ki of $192 \pm 27 \mu\text{M}$. These results show that acylase I catalyzes the deacetylation of NAC. The acylase I-catalyzed deacetylation of a range of S-alkyl-N-acetyl-L-cysteines, their carbon and oxygen analogs, and the selenium analog of NAM was also studied with porcine kidney acylase I. The specific activity of the acylase I-catalyzed deacetylation of these substrates was related to their calculated molar volumes and log P values. The S-alkyl-N-acetyl-L-cysteines with short ($\text{C}0\text{-C}3$) and unbranched S-alkyl substituents were good acylase I substrates, whereas the S-alkyl-N-acetyl-L-cysteines with long ($>\text{C}3$) and branched S-alkyl substituents were poor acylase I substrates. The carbon and oxygen analogs of S-methyl-N-acetyl-L-cysteine and the carbon analog of S-ethyl-N-acetyl-L-cysteine were poor acylase I substrates, whereas the selenium analog of NAM was a good acylase I substrate.
REFERENCE COUNT: 50 THERE ARE 50 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L6 ANSWER 21 OF 26 CAPLUS COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER: 1997:722992 CAPLUS
DOCUMENT NUMBER: 127:331721
ORIGINAL REFERENCE NO.: 127:65157a,65160a
TITLE: L-methionine related L-amino acids by acylase cleavage of their corresponding N-acetyl-DL-derivatives
AUTHOR(S): Bommarius, Andreas S.; Drauz, Karlheinz; Gunther, Kurt; Knaup, Gunter; Schwarm, Michael
CORPORATE SOURCE: Degussa AG, Specialty Chemicals, R and D Fine Chemicals, Hanau, D-63403, Germany
SOURCE: Tetrahedron: Asymmetry (1997), 8(19), 3197-3200
PUBLISHER: Elsevier
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 127:331721
AB Acylase I from *Aspergillus oryzae* is an even more useful enzyme than suggested so far. Besides standard amino acids such as L-Met, L-Val and L-Phe, a number of addnl. sulfur- and selenium-containing amino acids can be obtained at useful reaction rates and in very high enantiomeric purity by

kinetic resolution of the resp. N-acetyl-DL-amino acids.
REFERENCE COUNT: 19 THERE ARE 19 CITED REFERENCES AVAILABLE FOR THIS
RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L6 ANSWER 22 OF 26 CAPLUS COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER: 1996:30201 CAPLUS
DOCUMENT NUMBER: 124:203067
ORIGINAL REFERENCE NO.: 124:37565a,37568a
TITLE: A New Efficient Synthesis of Acetyltelluro- and
Acetylselenomethionine and Their Use in the
Biosynthesis of Heavy-Atom Protein Analogs
Karnbrock, Wilhelm; Weyher, Elisabeth; Budisa,
Nedeljkovic, Huber, Robert; Moroder, Luis
CORPORATE SOURCE: Max-Planck-Institut fuer Biochemie, Martinsried,
82152, Germany
SOURCE: Journal of the American Chemical Society (1996),
118(4), 913-14
CODEN: JACSAT; ISSN: 0002-7863
PUBLISHER: American Chemical Society
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 124:203067
AB N-Acetyl-DL-telluromethionine and N-acetyl-DL-selenomethionine were
obtained in good yields upon reaction of racemic
2-(acetylamino)butyrolactone with MeTeLi and MeSeLi, resp., and their
enantioselective hydrolysis with aminoacylase generated the related
L-amino acids. The biosynthesis of all-Met(Te)- and all-Met(Se)-annexin V
with the racemic acetyl derivs. was as efficient, if not better than the
use of the related L-amino acids.

L6 ANSWER 23 OF 26 CAPLUS COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER: 1993:184565 CAPLUS
DOCUMENT NUMBER: 118:184565
ORIGINAL REFERENCE NO.: 118:31479a,31482a
TITLE: Synthesis of a genetically engineered repetitive
polypeptide containing periodic selenomethionine
residues
AUTHOR(S): Dougherty, Michael J.; Kothakota, Srinivas; Mason,
Thomas L.; Tirrell, David A.; Fournier, Maurille J.
CORPORATE SOURCE: Dep. Biochem. Mol. Biol., Univ. Massachusetts,
Amherst, MA, 01003, USA
SOURCE: Macromolecules (1993), 26(7), 1779-81
CODEN: MAMOBX; ISSN: 0024-9297
DOCUMENT TYPE: Journal
LANGUAGE: English
AB This report describes the synthesis of the first genetically engineered
repetitive polypeptide containing selenomethionine, an unnatural amino acid.
A synthetic gene was constructed to encode nine repeats of the octapeptide
sequence {(GlyAla)3GlyMet} as a fusion protein at the carboxy terminus of
glutathione-S-transferase. This gene was introduced into an Escherichia
coli strain requiring methionine for growth. No growth was observed in the
absence of L-methionine, but growth could be maintained at a reduced rate
in the presence of L-selenomethionine. Induction of the target gene
produced a protein corresponding in mol. weight to the desired product in the
presence of either methionine or selenomethionine. The extent to which
selenomethionine will replace methionine was determined in competition expts.
using 35S-methionine and unlabeled selenomethionine. Consistent with the
expression data obtained in minimal medium supplemented solely with
selenomethionine, results from densitometric scanning of autoradiographs
indicate that the natural amino acid was completely replaced by the
selenium-containing analog.

L6 ANSWER 24 OF 26 CAPLUS COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER: 1985:169 CAPLUS
DOCUMENT NUMBER: 102:169
ORIGINAL REFERENCE NO.: 102:27a,30a
TITLE: Structure-activity relations for the fifth amino acid position of enkephalins, substitution of amino acids, and introduction of hydrophobic residues
AUTHOR(S): Valencia, G.; Reig, F.; Garcia-Anton, J. Maria; Garcia-Dominguez, J.
CORPORATE SOURCE: CSIC, Spain
SOURCE: Investigacion e Informacion Textil y de Tensioactivos (1984), 27(2-3), 135-54
CODEN: IITCS; ISSN: 0302-5268
DOCUMENT TYPE: Journal
LANGUAGE: Spanish
AB Enkephalin analogs were prepared and their physicochem. and pharmacol. properties studied in an attempt to elucidate the mechanism of action of narcotics. Met-enkephalin [58569-55-4] and analogs where the Met was replaced with SeMet, Ser, Thr, etc., were examined for the effect of the position of S, of the presence of a heteroatom or OH, and of the length of the chain on activity. Leu-enkephalin analogs with a C6-C14 chain covalently bound to Leu-enkephalin were examined for relation between physicochem. properties and opiate activity. The guinea pig ileum test was used to evaluate opiate activity.

L6 ANSWER 25 OF 26 CAPLUS COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER: 1976:429856 CAPLUS
DOCUMENT NUMBER: 85:29856
ORIGINAL REFERENCE NO.: 85:4841a,4844a
TITLE: Isolation and identification of two isomeric glutamylselenocystathionines from the seeds of Astragalus pectinatus
AUTHOR(S): Nigam, S. N.; McConnell, W. B.
CORPORATE SOURCE: Dep. Chem., Univ. Regina, Regina, SK, Can.
SOURCE: Biochimica et Biophysica Acta, General Subjects (1976), 437(1), 116-21
CODEN: BBGSB3; ISSN: 0304-4165
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Two glutamylselenocystathionines were isolated from the seeds of A. pectinatus. They were identified as 2- γ -glutamylamino-4-(2-amino-2-carboxyethylselenyl)butyric acid and 2-amino-4-(2- γ -glutamylamino-2-carboxyethylselenyl)butyric acid. The evidence for the natural occurrence of the corresponding glutamylcystationines is also presented.

L6 ANSWER 26 OF 26 CAPLUS COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER: 1968:487433 CAPLUS
DOCUMENT NUMBER: 69:87433
ORIGINAL REFERENCE NO.: 69:16387a,16390a
TITLE: A convenient synthesis of γ -benzylselenohomocysteine and the preparation of optically active selenomethionine
AUTHOR(S): Zdansky, Goran
CORPORATE SOURCE: Univ. Uppsala, Uppsala, Swed.
SOURCE: Arkiv foer Kemi (1968), 29(35), 437-42
CODEN: ARKEAD; ISSN: 0365-6128
DOCUMENT TYPE: Journal
LANGUAGE: English
AB A mixture of 34 g. PhCH₂SeH, 11.5 g. acrolein, and a few drops of Et₃N is kept in ice 30 min. to give 68% PhCH₂SeCH₂CH₂CHO (I), b_{0.2} 122-4°, n_{25D} 1.5860. A mixture of 30.6 g. I and 140 ml. MeOH is added to a solution of

11.5 g. NaCN, 45 g. (NH4)2CO3, and 10.2 g. NH4Cl in 115 ml. water and 57 ml. MeOH and the mixture is heated 20 hrs. at 55° to give 70% 5-(2-benzylselenoethyl)hydantoin (II), m. 123-4°. II (12.0 g.) is heated with 8.0 g. MeOH in 50 ml. water 1 day at 108° to give 86% γ-benzylselenohomocysteine (III). III (8.2 g.) in 15 ml. 2N NaOH and 6 ml. water is treated with 4 ml. Ac2O and 20 ml. 2N NaOH to give N-acetyl-γ-benzylselenohomocysteine (IV), m. 99-100°. IV (8.8 g.) is dissolved in 30 ml. N NaOH and 122 ml. 0.2M citrate buffer (pH 5), 5.7 g. aniline is added, the mixture is heated to give a solution, 2.4 g. papain is extracted with 21 ml. water and filtered, 0.45 g. L-cysteine-HCl is dissolved in 16 ml. citrate buffer, and the 3 solns. are mixed. The mixture is treated with 93 ml. citrate buffer and kept at 0° to give 90% L-IV, m. 156-7°; 0.1082 g. is dissolved in HOAc to 10.00 ml.: [α]25D -14.8° (c 1.082, HOAc). The mother liquor gives 93% D-VI, m. 137-8°, [α]25D -14.5° (c 1.009, HOAc). L-IV anilide is hydrolyzed to 88% L-III, 0.1025 g. L-III is dissolved in N HCl to 10.0 ml.: [α]25D 15.5°. Similarly prepared is D-III, [α]25D -0.158°, [α]25D -15.4° (N HCl). L-III (1.36 g.) is added to .apprx.30 ml. liquid NH3, Na shavings are added, NH4Cl is added to remove the blue color, and the mixture is kept at -70° and worked up to give 65% L-selenomethionine, [α]25D 18.1° (NHCl). Similarly prepared is D-selenomethionine, [α]25D -18.3° (N HCl). Rf values are given for the selenomethionines.

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=> s 13
L7      5 L3

=> d 17 1-5 ibib abs

L7  ANSWER 1 OF 5 CAPLUS COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER: 2005:14419 CAPLUS
DOCUMENT NUMBER: 142:114471
TITLE: Preparation of glycosylated amino acids, proteins and
peptides via olefin metathesis reactions
INVENTOR(S): Davis, Benjamin Guy; Kramer, Holger Bernd Ralf
PATENT ASSIGNEE(S): Isis Innovation Limited, UK
SOURCE: PCT Int. Appl., 48 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:
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| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|--|------|----------|-----------------|----------|
| WO 2005000873 | A1 | 20050106 | WO 2004-GB2738 | 20040624 |
| W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH,
CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD,
GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC,
LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI,
NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY,
TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW | | | | |
| RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM,
AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK,
EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE,
SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE,
SN, TD, TG | | | | |

PRIORITY APPLN. INFO.: GB 2003-14741 A 20030624
 AB A method for the preparation of a glycosylated amino acid, protein or peptide comprises reacting an unprotected carbohydrate containing a carbon-carbon

double bond (e.g., an allyl or vinyl C-glycoside) with an amino acid, a protein or a peptide containing a side-chain carbon-carbon double bond under olefin metathesis reaction conditions. The side-chain carbon-carbon double bond is introduced by (a) oxidizing the sulfur in methionine or the selenium in selenomethione or homoselenocysteine and (b) eliminating the sulfoxide or selenoxide. Thus, 3-(α -D-glucopyranosyl)propene, prepared by pivaloylation-allylation of glucose, was reacted with vinylglycine (vG) tripeptide Ac-vG-Ser-Phe-OMe in the presence of Grubbs-Hoveyda catalyst to afford the desired cross-metathesis product in mixture with the C-glycoside homodimer byproduct.

REFERENCE COUNT: 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L7 ANSWER 2 OF 5 CAPLUS COPYRIGHT 2009 ACS on STN
 ACCESSION NUMBER: 2004:467738 CAPLUS
 DOCUMENT NUMBER: 1411:17591
 TITLE: Agent having a destructive effect on malignant tumors and method for the production
 INVENTOR(S): Groke, Karl; Herwig, Ralf
 PATENT ASSIGNEE(S): C.Y.L. Handelsges. m.b.H., Austria; Ferdinand, Peter
 SOURCE: PCT Int. Appl., 35 pp.
 CODEN: PIXXD2
 DOCUMENT TYPE: Patent
 LANGUAGE: German
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|--|------|-----------------|-----------------|----------|
| WO 2004047832 | A1 | 20040610 | WO 2003-EP50712 | 20031013 |
| W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW | | | | |
| RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG | | | | |
| AT 2002001778 | A | 20040815 | AT 2002-1778 | 20021127 |
| AT 412447 | B | 20050325 | | |
| CA 2507273 | A1 | 20040610 | CA 2003-2507273 | 20031013 |
| AU 2003285351 | A1 | 20040618 | AU 2003-285351 | 20031013 |
| EP 1565176 | A1 | 20050824 | EP 2003-778338 | 20031013 |
| EP 1565176 | B1 | 20060524 | | |
| R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK | | | | |
| JP 2006508998 | T | 20060316 | JP 2004-554531 | 20031013 |
| AT 326958 | T | 20060615 | AT 2003-778338 | 20031013 |
| PT 1565176 | T | 20061031 | PT 2003-778338 | 20031013 |
| ES 2268452 | T3 | 20070316 | ES 2003-778338 | 20031013 |
| US 20060292218 | A1 | 20061228 | US 2006-536777 | 20060907 |
| PRIORITY APPLN. INFO.: | | | | |
| AB Disclosed is an agent which has a destructive effect on malignant tumors and contains alpha-ketoglutaric acid, N-acetyl-seleno-L-methionine, N-acetyl-L-methionine, and a compound that is capable of forming azomethine and is selected among the group 5-hydroxymethylfurfural, dehydroascorbic acid, maltol, and vanillin as an active substance, 5-hydroxymethylfurfural being preferred. The inventive agent can be used in the form of an | | | | |
| | | AT 2002-1778 | A | 20021127 |
| | | EP 2003-778338 | A | 20031013 |
| | | WO 2003-EP50712 | W | 20031013 |

infusion, in an oral or rectal form of administration, or as an irrigation in cancer therapy. The treatment of cancer patients with the following infusion solution is reported: α -ketoglutaric acid 9.0 g/L; 5-hydroxymethyl furfural 3.0 g/L; N-acetyl-seleno-L-methionine 2.0 mg/L; N-acetyl-L-methionine 100.00 mg/L; glucose 30.0 g/L; sodium and potassium ions to set pH.

REFERENCE COUNT: 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L7 ANSWER 3 OF 5 CAPLUS COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER: 1998:485713 CAPLUS
DOCUMENT NUMBER: 129:146163
ORIGINAL REFERENCE NO.: 129:29727a,29730a
TITLE: Acylase I-catalyzed deacetylation of N-acetyl-L-cysteine and S-alkyl-N-acetyl-L-cysteines
AUTHOR(S): Uttamsingh, Vinita; Keller, D. A.; Anders, M. W.
CORPORATE SOURCE: Department of Pharmacology and Physiology, University of Rochester, Rochester, NY, 14642, USA
SOURCE: Chemical Research in Toxicology (1998), 11(7), 800-809
PUBLISHER: American Chemical Society
DOCUMENT TYPE: Journal
LANGUAGE: English

AB The aminoacylase that catalyzes the hydrolysis of N-acetyl-L-cysteine (NAC) was identified as acylase I after purification by column chromatog. and electrophoretic anal. Rat kidney cytosol was fractionated by ammonium sulfate precipitation, and the proteins were separated by ion-exchange column chromatog., gel-filtration column chromatog., and hydrophobic interaction column chromatog. Acylase activity with NAC and N-acetyl-L-methionine (NAM), a known substrate for acylase I, as substrates cooled during all chromatog. steps. Sodium dodecyl sulfate-polyacrylamide gel electrophoresis showed that the protein was purified to near homogeneity and had a subunit Mr of 43 000, which is identical with the Mr of acylase I from porcine kidney and bovine liver. N-Butyrimalic acid was a slow-binding inhibitor of acylase I and inhibited the deacetylation of NAC with a Ki of $192 \pm 27 \mu\text{M}$. These results show that acylase I catalyzes the deacetylation of NAC. The acylase I-catalyzed deacetylation of a range of S-alkyl-N-acetyl-L-cysteines, their carbon and oxygen analogs, and the selenium analog of NAM was also studied with porcine kidney acylase I. The specific activity of the acylase I-catalyzed deacetylation of these substrates was related to their calculated molar volumes and log P values. The S-alkyl-N-acetyl-L-cysteines with short (C0-C3) and unbranched S-alkyl substituents were good acylase I substrates, whereas the S-alkyl-N-acetyl-L-cysteines with long (>C3) and branched S-alkyl substituents were poor acylase I substrates. The carbon and oxygen analogs of S-methyl-N-acetyl-L-cysteine and the carbon analog of S-ethyl-N-acetyl-L-cysteine were poor acylase I substrates, whereas the selenium analog of NAM was a good acylase I substrate.

REFERENCE COUNT: 50 THERE ARE 50 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L7 ANSWER 4 OF 5 CAPLUS COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER: 1997:722992 CAPLUS
DOCUMENT NUMBER: 127:331721
ORIGINAL REFERENCE NO.: 127:65157a,65160a
TITLE: L-methionine related L-amino acids by acylase cleavage of their corresponding N-acetyl-DL-derivatives
AUTHOR(S): Bommarius, Andreas S.; Drauz, Karlheinz; Gunther, Kurt; Knauf, Gunter; Schwarm, Michael
CORPORATE SOURCE: Degussa AG, Specialty Chemicals, R and D Fine Chemicals, Hanau, D-63403, Germany
SOURCE: Tetrahedron: Asymmetry (1997), 8(19), 3197-3200

CODEN: TASYE3; ISSN: 0957-4166
 PUBLISHER: Elsevier
 DOCUMENT TYPE: Journal
 LANGUAGE: English
 OTHER SOURCE(S): CASREACT 127:331721
 AB Acylase I from *Aspergillus oryzae* is an even more useful enzyme than suggested so far. Besides standard amino acids such as L-Met, L-Val and L-Phe, a number of addnl. sulfur- and selenium-containing amino acids can be obtained at useful reaction rates and in very high enantiomeric purity by kinetic resolution of the resp. N-acetyl-DL-amino acids.
 REFERENCE COUNT: 19 THERE ARE 19 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L7 ANSWER 5 OF 5 CAPLUS COPYRIGHT 2009 ACS on STN
 ACCESSION NUMBER: 1996:30201 CAPLUS
 DOCUMENT NUMBER: 124:203067
 ORIGINAL REFERENCE NO.: 124:37565a,37568a
 TITLE: A New Efficient Synthesis of Acetyltelluro- and Acetylselemonethionine and Their Use in the Biosynthesis of Heavy-Atom Protein Analogs
 AUTHOR(S): Karnbrock, Wilhelm; Weyher, Elisabeth; Budisa, Nediljko; Huber, Robert; Moroder, Luis
 CORPORATE SOURCE: Max-Planck-Institut fuer Biochemie, Martinsried, 82152, Germany
 SOURCE: Journal of the American Chemical Society (1996), 118(4), 913-14
 CODEN: JACSAT; ISSN: 0002-7863
 PUBLISHER: American Chemical Society
 DOCUMENT TYPE: Journal
 LANGUAGE: English
 OTHER SOURCE(S): CASREACT 124:203067
 AB N-Acetyl-DL-telluromethionine and N-acetyl-DL-selemonethionine were obtained in good yields upon reaction of racemic 2-(acetylamino)butyrolactone with MeTeLi and MeSeLi, resp., and their enantioselective hydrolysis with aminoacylase generated the related L-amino acids. The biosynthesis of all-Met(Te)- and all-Met(Se)-annexin V with the racemic acetyl derivs. was as efficient, if not better than the use of the related L-amino acids.

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| FULL ESTIMATED COST | 119.50 | 384.03 |
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| CA SUBSCRIBER PRICE | -25.42 | -25.42 |

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| NEWS | 2 | CAS patent coverage to include exemplified prophetic substances identified in English-, French-, German-, and Japanese-language basic patents from 2004-present |
| NEWS | 3 | NOV 26 MARPAT enhanced with FSORT command |
| NEWS | 4 | NOV 26 CHEMSAFE now available on STN Easy |
| NEWS | 5 | NOV 26 Two new SET commands increase convenience of STN searching |
| NEWS | 6 | DEC 01 ChemPort single article sales feature unavailable |
| NEWS | 7 | DEC 12 GBFULL now offers single source for full-text coverage of complete UK patent families |
| NEWS | 8 | DEC 17 Fifty-one pharmaceutical ingredients added to PS |
| NEWS | 9 | JAN 06 The retention policy for unread STNmail messages will change in 2009 for STN-Columbus and STN-Tokyo |
| NEWS | 10 | JAN 07 WPIDS, WPIINDEX, and WPIX enhanced Japanese Patent Classification Data |
| NEWS | 11 | FEB 02 Simultaneous left and right truncation (SLART) added for CERAB, COMPUB, ELCOM, and SOLIDSTATE |
| NEWS | 12 | FEB 02 GENBANK enhanced with SET PLURALS and SET SPELLING |
| NEWS | 13 | FEB 06 Patent sequence location (PSL) data added to USGENE |
| NEWS | 14 | FEB 10 COMPENDEX reloaded and enhanced |
| NEWS | 15 | FEB 11 WTRYTITLES reloaded and enhanced |

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AND CURRENT DISCOVER FILE IS DATED 23 JUNE 2008

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SINCE FILE TOTAL

FULL ESTIMATED COST

ENTRY SESSION
0.22 0.22

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                                ENTRY        SESSION
FULL ESTIMATED COST          0.90           1.12

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DICTIONARY FILE UPDATES: 11 FEB 2009 HIGHEST RN 1104680-36-5

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<http://www.cas.org/support/stndgen/stndoc/properties.html>

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E2      16    ACETYL METHIONATE/BI
E3      29 --> ACETYL METHIONINE/BI
E4      20    ACETYL METHIONYL/BI
E5      73    ACETYL METHOXY/BI
E6      56    ACETYL METHOXYAMINO/BI
E7      1     ACETYL METHOXYAMMONIUM/BI
E8      3     ACETYL METHOXYBIS/BI
E9      1     ACETYL METHOXYPHENYL/BI
E10     1     ACETYL METHOXYTYR/BI
E11     1     ACETYL METHOXYTYRAMINE/BI
E12     6266   ACETYL METHYL/BI

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L1 29 ACETYL METHIONINE/BI

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=> s (11 or acetylmethionine) and (cancer? or tumor? or neoplasm?)
L2 55 (L1 OR ACETYLMETHIONINE) AND (CANCER? OR TUMOR? OR NEOPLASM?)

=> s 12 and py<=2003
1 FILES SEARCHED...
L3 28 L2 AND PY<=2003

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PROCESSING COMPLETED FOR L3
L4 27 DUP REM L3 (1 DUPLICATE REMOVED)

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L4 ANSWER 1 OF 27 CAPLUS COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER: 2003:434321 CAPLUS
DOCUMENT NUMBER: 139:923
TITLE: Methods and compositions for ameliorating the undesirable effects of chemotherapy
INVENTOR(S): Kil, Jonathan; Lynch, Eric D.
PATENT ASSIGNEE(S): Sound Pharmaceuticals Incorporated, USA
SOURCE: PCT Int. Appl., 27 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|--|------|----------|-----------------|--------------|
| WO 2003045334 | A2 | 20030605 | WO 2002-US38279 | 20021127 <-- |
| WO 2003045334 | A3 | 20040226 | | |
| W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN,
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GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KE, KR, KZ, LC, LK, LR,
LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH,
PL, PT, RO, RU, SC, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT,
TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW | | | | |
| RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY,
KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES,
FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, SK, TR, BF, BJ, CF,
CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG | | | | |
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| AU 2002352982 | A1 | 20030610 | AU 2002-352982 | 20021127 <-- |
| AU 2002352982 | B2 | 20080306 | | |
| US 20030157191 | A1 | 20030821 | US 2002-307245 | 20021127 <-- |
| EP 1461033 | A2 | 20040929 | EP 2002-789945 | 20021127 |
| R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,
IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, SK | | | | |
| CN 1596111 | A | 20050316 | CN 2002-823676 | 20021127 |
| JP 2005510537 | T | 20050421 | JP 2003-546839 | 20021127 |
| US 20060089313 | A1 | 20060427 | US 2005-299084 | 20051209 |
| PRIORITY APPLN. INFO.: | | | US 2001-334140P | P 20011129 |
| | | | US 2002-307245 | A1 20021127 |
| | | | WO 2002-US38279 | W 20021127 |

AB In one aspect, the present invention provides chemoprotectant compns. that

comprise at least two of the chemoprotectants disclosed herein. The chemoprotectant compns. of the invention are useful, for example, for ameliorating at least one adverse effect of chemotherapy. In another aspect, the present invention provides methods of ameliorating at least one adverse effect of chemotherapy, the methods each comprising the step of administering to a subject undergoing chemotherapy an amount of a chemoprotectant composition that is effective to ameliorate at least one adverse effect of the chemotherapy. The chemoprotectants include glutathione or precursors thereof, antioxidants, and glutathione peroxidase mimics. For example, N-acetylcysteine, ebselen, and allopurinol, alone or in combination, did not inhibit the ability of cisplatin to kill cultured NuTu-19 ovarian cancer cells as measured using the MTS cell viability assay.

L4 ANSWER 2 OF 27 CAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 2003:940007 CAPLUS
DOCUMENT NUMBER: 140:156689

TITLE: Reduction of Sulindac to its active metabolite, sulindac sulfide: assay and role of the methionine sulfoxide reductase system

AUTHOR(S): Etienne, Frantzy; Resnick, Lionel; Sagher, Daphna; Brot, Nathan; Weissbach, Herbert

CORPORATE SOURCE: Center for Molecular Biology and Biotechnology, Florida Atlantic University, Boca Raton, FL, USA

SOURCE: Biochemical and Biophysical Research Communications (2003), 312(4), 1005-1010

CODEN: BBRCA9; ISSN: 0006-291X

PUBLISHER: Elsevier Science

DOCUMENT TYPE: Journal

LANGUAGE: English

AB Sulindac is a known anti-inflammatory drug that functions by inhibition of cyclooxygenases 1 and 2 (COX). There has been recent interest in Sulindac and other non-steroidal anti-inflammatory drugs (NSAID) because of their anti-tumor activity against colorectal cancer.

Studies with sulindac have indicated that it may also function as an anti-tumor agent by stimulating apoptosis. Sulindac is a pro-drug, containing a Me sulfoxide group, that must be reduced to sulindac sulfide to be active as a COX inhibitor. In the present studies the authors have developed a simple assay to measure sulindac reduction and tested sulindac as a substrate for 6 known members of the methionine sulfoxide reductase (Msr) family that have been identified in Escherichia coli. Only MsrA and a membrane associated Msr can reduce sulindac to the active sulfide. The reduction of sulindac also has been demonstrated in exts. of calf liver, kidney, and brain. Sulindac reductase activity is also present in mitochondria and microsomes.

REFERENCE COUNT: 47 THERE ARE 47 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 3 OF 27 CAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 2002:608891 CAPLUS

DOCUMENT NUMBER: 137:304430

TITLE: L-Methionine Inhibits Reaction of DNA with Anticancer cis-Diamminedichloroplatinum(II)

AUTHOR(S): Vrana, Oldrich; Brabec, Viktor

CORPORATE SOURCE: Institute of Biophysics, Academy of Sciences of the Czech Republic, Brno, CZ-61265, Czech Rep.

SOURCE: Biochemistry (2002), 41(36), 10994-10999

CODEN: BICHAW; ISSN: 0006-2960

PUBLISHER: American Chemical Society

DOCUMENT TYPE: Journal

LANGUAGE: English

AB Sufficient evidence has accumulated to identify DNA as the relevant

pharmacol. target of antitumor cisplatin [*cis*-diamminedichloroplatinum(II)]. This drug is administered i.v. so that before it reaches DNA in the nucleus of tumor cells it may interact with various compds. including sulfur-containing mols. such as L-methionine or the compds. containing these residues. L-Methionine increases the rate of reaction of cisplatin with monomeric GMP, and it was suggested on the basis of these results previously obtained by other authors that methionine residues could mediate the transfer of platinum onto DNA. We studied in the present work the reactions of the 1:1 complex formed between cisplatin and L-methionine or N-acetyl-L-methionine with synthetic, single- and double-stranded oligodeoxyribonucleotides and natural, high mol. mass DNA by using high-pressure liquid chromatog. and flameless atomic absorption spectrophotometry. The results demonstrate that both L-methionine and N-acetyl-L-methionine decrease the rate of reaction of cisplatin with base residues in natural, high mol. mass DNA. Thus, the possibility that cisplatin bound to methionine residues serves as a drug reservoir available for platination of DNA in the nucleus of tumor cells appears unlikely.

REFERENCE COUNT: 22 THERE ARE 22 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 4 OF 27 MEDLINE on STN
ACCESSION NUMBER: 2002097869 MEDLINE
DOCUMENT NUMBER: PubMed ID: 11827570
TITLE: Cystathione pathway-dependent cytotoxicities of diethyl maleate and diamide in rat and human hepatoma-derived cell cultures.
AUTHOR: Dierickx Paul J; De Beer Jacques O; Scheers Ellen M
CORPORATE SOURCE: Laboratorium Biochemische Toxikologie, Instituut voor Volksgezondheid, Afdeling Toxikologie, Wytsmanstraat 14, 1050 Brussels, Belgium.
SOURCE: Alternatives to laboratory animals : ATLA, (2002 Jan-Feb) Vol. 30, No. 1, pp. 61-8.
JOURNAL code: 8110074. ISSN: 0261-1929.
PUB. COUNTRY: England: United Kingdom
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 200204
ENTRY DATE: Entered STN: 6 Feb 2002
Last Updated on STN: 4 Apr 2002
Entered Medline: 2 Apr 2002

AB Glutathione (GSH) plays a role in many toxicologically important metabolic processes. It was previously established that L-buthionine S,R-sulfoximine (BSO), a specific inhibitor of (- glutamylcysteine synthetase, reduces the GSH content more efficiently in rat (Fa32) than in human (HEp-G2) hepatoma-derived cells. We therefore investigated whether the cystathionase inhibitor propargylglycine (PPG) could further decrease the BSO-induced GSH depletion in HEp-G2 cells. The influence of the cystathionine precursors N-acetyl-L-methionine, methionine and homocysteine on the cytotoxicity of diethyl maleate (DEM) and diamide [1,1'-azobis(N,N-dimethylformamide)] was also investigated. PPG reduced the GSH content in both cell lines. A further GSH decrease in HEp-G2 was obtained when using a BSO + PPG combination containing relatively high concentrations of PPG. BSO diminished the toxicity of PPG. Homocysteine was the most efficacious of the tested cystathionine precursors in increasing the GSH content and reducing the cytotoxicity of DEM and diamide in Fa32 and HEp-G2 cells.

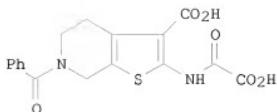
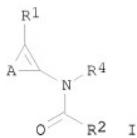
L4 ANSWER 5 OF 27 CAPLUS COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER: 1999:595178 CAPLUS
DOCUMENT NUMBER: 131:243258

TITLE: Preparation of thieno[2,3-c]pyrans and
 thieno[2,3-c]pyridines as modulators of protein
 tyrosine phosphatases (PTPases)
 INVENTOR(S): Moller, Niels Peter Hundahl; Andersen, Henrik Sune;
 Iversen, Lars Fogh; Olsen, Ole Hvilsted; Branner,
 Sven; Holsworth, Daniel Dale; Bakir, Farid; Judge,
 Luke Milburn; Axe, Frank Urban; Jones, Todd Kevin;
 Ripka, William Charles; Ge, Yu; Uyeda, Roy Teruyuki
 PATENT ASSIGNEE(S): Novo Nordisk A/S, Den.; Ontogen Corporation
 SOURCE: PCT Int. Appl., 157 pp.
 DOCUMENT TYPE: Patent
 LANGUAGE: English
 FAMILY ACC. NUM. COUNT: 6
 PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|------|----------|-----------------|--------------|
| WO 9946267 | A1 | 19990916 | WO 1999-DK121 | 19990311 <-- |
| W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ,
DE, DK, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS,
JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK,
MN, MM, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ,
TM, TR, TT, UA, UG, UZ, VN, YU, ZW | | | | |
| RW: GH, GM, KE, LS, MW, SD, SL, SZ, UG, ZW, AT, BE, CH, CY, DE, DK,
ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG,
CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG | | | | |
| CA 2323493 | A1 | 19990916 | CA 1999-2323493 | 19990311 <-- |
| AU 9927135 | A | 19990927 | AU 1999-27135 | 19990311 <-- |
| BR 9908726 | A | 20001121 | BR 1999-8726 | 19990311 <-- |
| EP 1080095 | A1 | 20010307 | EP 1999-907332 | 19990311 <-- |
| EP 1080095 | B1 | 20051102 | | |
| R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, PT, IE,
SI, LT, FI, RO | | | | |
| US 6262044 | B1 | 20010717 | US 1999-268490 | 19990311 <-- |
| JP 2002506072 | T | 20020226 | JP 2000-535645 | 19990311 <-- |
| HU 2001004984 | A2 | 20020429 | HU 2001-4984 | 19990311 <-- |
| HU 2001004984 | A3 | 20030728 | | |
| AT 308546 | T | 20051115 | AT 1999-907332 | 19990311 <-- |
| ZA 9902036 | A | 19991001 | ZA 1999-2036 | 19990312 <-- |
| NO 2000004527 | A | 20001107 | NO 2000-4527 | 20000911 <-- |
| MX 2000008927 | A | 20010328 | MX 2000-8927 | 20000912 <-- |
| IN 2000CN00375 | A | 20050304 | IN 2000-CN375 | 20000912 |
| US 6410586 | B1 | 20020625 | US 2001-810266 | 20010316 <-- |
| US 20030069267 | A1 | 20030410 | US 2002-158464 | 20020528 <-- |
| US 6951878 | B2 | 20051004 | | |

| | | |
|------------------------|-----------------|-------------|
| PRIORITY APPLN. INFO.: | DK 1998-344 | A 19980312 |
| | DK 1998-480 | A 19980403 |
| | DK 1998-938 | A 19980715 |
| | DK 1998-1385 | A 19981028 |
| | DK 1998-1612 | A 19981207 |
| | US 1998-82915P | P 19980424 |
| | US 1998-93525P | P 19980721 |
| | US 1998-108747P | P 19981117 |
| | US 1999-268490 | A3 19990311 |
| | WO 1999-DK121 | W 19990311 |
| | US 2001-810266 | A3 20010316 |

OTHER SOURCE(S): MARPAT 131:243258
 GI



AB Thieno[2,3-c]pyrans and thieno[2,3-c]pyridines (I) [A = atoms to complete various 5/5 and 5/6 bicyclic heterocycles, e.g., thienopridines, thieno(thio)pyrans, benzothiophenes, etc.; R1 and R2 = independently acyl, OH or derivs., CF₃, NO₂, cyano, SO₃H, (un)substituted NH₂ or PO₃H₂, or various 5-membered heterocycles; R4 = H, OH, alkyl, (un)substituted aryl or aralkyl, (un)substituted NH₂, alkoxy] were prepared as inhibitors of Protein Tyrosine Phosphatases (PTPases) such as PTP1B, CD45, SHP-1, SHP-2, PTP α , LAR, and HePTP. The compds. are useful in the treatment of type I diabetes, type II diabetes, impaired glucose tolerance, insulin resistance, obesity, immune dysfunctions including autoimmunity diseases with dysfunctions of the coagulation system, allergic diseases including asthma, osteoporosis, proliferative disorders including cancer and psoriasis, diseases with decreased or increased synthesis or effects of growth hormone, diseases with decreased or increased synthesis of hormones or cytokines that regulate the release of/or response to growth hormone, diseases of the brain including Alzheimer's disease and schizophrenia, and infectious diseases. For instance, 2-amino-6-benzoyl-4,5,6,7-tetrahydrothieno[2,3-c]pyridine-3-carboxylic acid Et ester was amidated with Et oxalyl chloride in THF (84%), followed by hydrolysis of the ester function with NaOH in aqueous solution to give the title compound(II) as the mono-Na salt (III) in 79% yield. In an *in vitro* test against PTP1B expressed in *E. coli* and purified by known methods, III had a Ki of 51 μ M.

REFERENCE COUNT: 8 THERE ARE 8 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 6 OF 27 CAPLUS COPYRIGHT 2009 ACS on STN
 ACCESSION NUMBER: 1999:595127 CAPLUS
 DOCUMENT NUMBER: 131:228643
 TITLE: Preparation of oxalylaminothiophene derivatives as modulators of protein tyrosine phosphatases (PTPases)
 INVENTOR(S): Richter, Lutz Stefan; Andersen, Henrik Sune; Vagner, Josef; Jeppesen, Claus Bekker; Moller, Niels Peter Hundahl; Branner, Sven; Jeppesen, Lone; Olsen, Ole Hvilsted; Iversen, Lars Fogh; Holsworth, Daniel Dale; Axe, Frank Urban; Ge, Yu; Jones, Todd Kevin; Ripka, William Charles; Uyeda, Roy Teruyuki; Su, Jing; Bakir, Farid; Judge, Luke Milburn
 PATENT ASSIGNEE(S): Novo Nordisk A/S, Den.; Ontogen Corporation; Richter, Birgith
 SOURCE: PCT Int. Appl., 230 pp.
 DOCUMENT TYPE: Patent
 LANGUAGE: English
 FAMILY ACC. NUM. COUNT: 6
 PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|------------|------|----------|-----------------|-------------|
| WO 9946237 | A1 | 19990916 | WO 1999-DK126 | 19990312 <- |

W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ,
 DE, DK, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS,
 JP, KE, KG, KP, KR, KZ, LC, LR, LS, LT, LU, LV, MD, MG, MK,
 MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ,
 TM, TR, TT, UA, US, UG, VN, YU, ZW
 RW: GH, GM, KE, LS, MW, SD, SL, SZ, UG, ZW, AT, BE, CH, CY, DE, DK,
 ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG,
 CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG

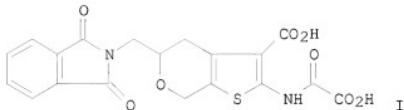
| | | | | |
|--|----|----------|-----------------|--------------|
| US 6225329 | B1 | 20010501 | US 1999-265069 | 19990309 <-- |
| US 20020019412 | A1 | 20020214 | US 1999-265316 | 19990309 <-- |
| AU 9927139 | A | 19990927 | AU 1999-27139 | 19990311 <-- |
| US 6262044 | B1 | 20010717 | US 1999-268490 | 19990311 <-- |
| CA 2323472 | A1 | 19990916 | CA 1999-2323472 | 19990312 <-- |
| ZA 9902029 | A | 19990927 | ZA 1999-2029 | 19990312 <-- |
| ZA 9902032 | A | 19990927 | ZA 1999-2032 | 19990312 <-- |
| ZA 9902038 | A | 19990927 | ZA 1999-2038 | 19990312 <-- |
| ZA 9902036 | A | 19991001 | ZA 1999-2036 | 19990312 <-- |
| BR 9908723 | A | 20001121 | BR 1999-8723 | 19990312 <-- |
| EP 1080068 | A1 | 20010307 | EP 1999-907336 | 19990312 <-- |
| R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, PT, IE,
SI, LT, FI, RO | | | | |
| HU 2001002612 | A2 | 20011128 | HU 2001-2612 | 19990312 <-- |
| JP 2004500308 | T | 20040108 | JP 2000-535620 | 19990312 |
| NO 2000004526 | A | 20001108 | NO 2000-4526 | 20000511 <-- |
| MX 2000008921 | A | 20020409 | MX 2000-8921 | 20000512 <-- |
| US 6410586 | B1 | 20020625 | US 2001-810266 | 20010316 <-- |
| US 20030069267 | A1 | 20030410 | US 2002-158464 | 20020528 <-- |
| US 6951878 | B2 | 20051004 | | |

PRIORITY APFLN. INFO.:

| | | |
|-----------------|---|----------|
| DK 1998-350 | A | 19980312 |
| DK 1998-345 | A | 19980312 |
| DK 1998-343 | A | 19980312 |
| DK 1998-342 | A | 19980312 |
| DK 1998-344 | A | 19980312 |
| DK 1998-347 | A | 19980312 |
| DK 1998-346 | A | 19980312 |
| DK 1998-348 | A | 19980312 |
| DK 1998-479 | A | 19980403 |
| DK 1998-472 | A | 19980403 |
| DK 1998-473 | A | 19980403 |
| DK 1998-478 | A | 19980403 |
| DK 1998-475 | A | 19980403 |
| DK 1998-474 | A | 19980403 |
| DK 1998-476 | A | 19980403 |
| DK 1998-480 | A | 19980403 |
| US 1998-82912P | P | 19980424 |
| DK 1998-667 | A | 19980515 |
| US 1998-88115P | P | 19980605 |
| DK 1998-939 | A | 19980715 |
| DK 1998-940 | | 19980715 |
| DK 1998-938 | | 19980715 |
| DK 1998-1385 | | 19981028 |
| DK 1998-1561 | | 19981126 |
| DK 1998-1612 | | 19981207 |
| US 1998-82365P | P | 19980420 |
| US 1998-82371P | P | 19980420 |
| US 1998-82373P | P | 19980420 |
| US 1998-82913P | P | 19980424 |
| US 1998-82914P | P | 19980424 |
| US 1998-82915P | P | 19980424 |
| US 1998-93525P | P | 19980721 |
| US 1998-93638P | P | 19980721 |
| US 1998-108747P | P | 19981117 |

US 1999-268490 A3 19990311
WO 1999-DK126 W 19990312
US 2001-810266 A3 20010316

GI



AB Oxalylaminoheterocycles (e.g., oxalylaminothiophene and oxalylaminothiopyran derivs., etc.) were prepared as inhibitors of Protein Tyrosine Phosphatases (PTPases), such as PTP1B, TC-PTP, CD45, SHP-1, SHP-2, PTP α , PTP ϵ , PTP μ , PTP δ , PTP σ , PTP ζ , PTP β , PTPD1, PTPD2, PTPH1, PTP-MEG1, PTP-LAR, and HePTP. These compds. are indicated in the management or treatment of a broad range of diseases such as autoimmune diseases, acute and chronic inflammation, osteoporosis, various forms of cancer and malignant diseases, and type I diabetes and type II diabetes. For instance, 2-amino-5-hydroxymethyl-4,7-dihydro-5H-thieno[2,3-c]pyran-3-carboxylic acid tert-Bu ester (preparation given) was reacted with phthalimide in THF, PPh3, and DIAD to form the 5-phthalimidomethyl derivative (47%). The amine was amidated with imidazol-1-yloxoacetic acid tert-Bu ester in CH2Cl2 and TEA (99%), followed by hydrolysis of the ester function with TFA in CH2Cl2, to give 5-(1,3-dioxo-1,3-dihydroisoindol-2-ylmethyl)-2-(oxalylamino)-4,7-dihydro-5H-thieno[2,3-c]pyran-3-carboxylic acid (I) in 57% yield. In an *in vitro* test against PTP1B expressed in *E. coli* and purified by known methods, Ki values at various inhibitor concns. were determined. An anal. of selectivity of two PTPase inhibitors against PTP1B, PTP-LAR, PTP ϵ , CD45, and PTP β showed that one compound of the invention is a non-selective inhibitor, whereas another behaves like a selective inhibitor.

REFERENCE COUNT: 2 THERE ARE 2 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 7 OF 27 CAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 1999:189901 CAPLUS

DOCUMENT NUMBER: 131:4137

TITLE: Identification of a second major tumor -specific antigen recognized by CTLs on mouse mastocytoma P815

AUTHOR(S): Bilsborough, Janine; Van Pel, Aline; Uyttenhove, Catherine; Boon, Thierry; Van den Eynde, Benoit J.

CORPORATE SOURCE: Ludwig Institute for Cancer Research, Universite Catholique de Louvain, Brussels, Belg.

SOURCE: Journal of Immunology (1999), 162(6), 3534-3540

CODEN: JOIMA3; ISSN: 0022-1767

PUBLISHER: American Association of Immunologists

DOCUMENT TYPE: Journal

LANGUAGE: English

AB Murine mastocytoma P815 induces CTL responses against at least four distinct Ags (AB, C, D, and E). Recent studies have shown that the main component of the CTL response against the P815 tumor is targeted against Ags P815AB and P815E. The gene P1A has been well characterized. It encodes the P815AB Ag in the form of a nonameric peptide containing two epitopes, P815A and P815B, which are recognized by different CTLs. Here,

the authors report the identification of the P815E Ag. Using a cDNA library derived from tumor P815, the authors identified the gene coding for P815E. The authors also characterized the antigenic peptide that anti-P815E CTLs recognize on the MHC class I mol. H-2Kd. The P815E Ag results from a mutation within an ubiquitously expressed gene encoding methionine sulfoxide reductase, an enzyme that is believed to be important in the protection of proteins against the byproducts of aerobic metabolism. Surprisingly, immunizing mice i.p. with syngeneic tumor cells (L1210) that were constructed to express B7-1 and P815E did not induce resistance against live P815, even though a strong anti-P815E CTL response was observed with splenocytes from immunized animals.

REFERENCE COUNT: 44 THERE ARE 44 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 8 OF 27 MEDLINE on STN DUPLICATE 1
ACCESSION NUMBER: 1998347170 MEDLINE
DOCUMENT NUMBER: PubMed ID: 9682248
TITLE: Growth inhibition of subcutaneously transplanted hepatomas without cachexia by alteration of the dietary arginine-methionine balance.
AUTHOR: Millis R M; Diya C A; Reynolds M E; Dehkordi O; Bond V Jr
CORPORATE SOURCE: Department of Physiology and Biophysics, Howard University, Washington, DC 20059, USA.
SOURCE: Nutrition and cancer, (1998) Vol. 31, No. 1, pp. 49-55.
PUB. COUNTRY: Journal code: 7905040. ISSN: 0163-5581.
DOCUMENT TYPE: United States
LANGUAGE: Journal; Article; (JOURNAL ARTICLE)
FILE SEGMENT: English
ENTRY MONTH: Priority Journals
199810
ENTRY DATE: Entered STN: 21 Oct 1998
Last Updated on STN: 21 Oct 1998
Entered Medline: 15 Oct 1998

AB Previous studies have shown that alteration of the dietary arginine-methionine balance by use of synthetic L-amino acids inhibits tumor growth of a subcutaneously transplanted Morris hepatoma at the expense of maintaining body weight. However, L-methionine is susceptible to degradation and, therefore, may contribute to a deficiency state. The present studies were performed to determine whether growth of subcutaneous hepatoma transplants is inhibited, and body growth maintained, when rats are fed diets containing L-methionine in replacement of N-acetyl-L-methionine (NALM) for 28 days. Tumor-free and tumor-bearing rats fed a control diet, with amino acids replacing protein, had gains in body weight: 31.3 +/- 1.0 and 19.1 +/- 0.5 g (12% and 7%, respectively. Rats fed six experimental diets, with varying L-arginine-NALM balances, had body weight gains ranging from 18.4 +/- 0.3 to 26.7 +/- 0.9 g (7-10%). Tumor weight of control rats was 10.65 +/- 0.24% of body weight. Diets supplemented with L-arginine in combination with normal and deficient NALM decreased tumor weights by 35% and 38%, respectively. It is concluded that dietary replacement of L-methionine with NALM and supplementation with L-arginine inhibits growth of a subcutaneously transplanted Morris hepatoma in the absence of cachexia.

L4 ANSWER 9 OF 27 CAPLUS COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER: 1996:476772 CAPLUS
DOCUMENT NUMBER: 125:115140
ORIGINAL REFERENCE NO.: 125:21639a,21642a
TITLE: Preparation of nitric oxide-releasing agents for reducing metastasis risk
INVENTOR(S): Korthuis, Ronald J.; Kong, Lipu; Keefer, Larry K.

PATENT ASSIGNEE(S): United States Dept. of Health and Human Services, USA
 SOURCE: PCT Int. Appl., 47 pp.
 CODEN: PIXXD2
 DOCUMENT TYPE: Patent
 LANGUAGE: English
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|--|------|----------|-----------------|--------------|
| WO 9615781 | A1 | 19960530 | WO 1995-US15381 | 19951120 <-- |
| W: AM, AT, AU, BB, BG, BR, BY, CA, CH, CN, CZ, DE, DK, EE, ES, FI,
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MG, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, TJ,
TM, TT | | | | |
| RW: KE, LS, MW, SD, SZ, UG, AT, BE, CH, DE, DK, ES, FR, GB, GR, IE,
IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR,
NE, SN, TD, TG | | | | |
| US 5700830 | A | 19971223 | US 1994-344341 | 19941122 <-- |
| CA 2205555 | A1 | 19960530 | CA 1995-2205555 | 19951120 <-- |
| CA 2205555 | C | 20010821 | | |
| AU 9642460 | A | 19960617 | AU 1996-42460 | 19951120 <-- |
| AU 699387 | B2 | 19981203 | | |
| EP 804177 | A1 | 19971105 | EP 1995-940844 | 19951120 <-- |
| R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE | | | | |
| JP 10509181 | T | 19980908 | JP 1995-517097 | 19951120 <-- |
| PRIORITY APPLN. INFO.: | | | US 1994-344341 | A 19941122 |
| | | | WO 1995-US15381 | W 19951120 |

OTHER SOURCE(S): MARPAT 125:115140
 AB Title agents, comprising N2O2-containing biopolymers, e.g., RN(O):NOR1 [R = (in)organic moiety; R1 = R, a pharmaceutically acceptable metal center (sic), pharmaceutically acceptable cation] wherein said N2O2 group is bonded to said biopolymer through ≥ 1 of R or R1, were prepared. Thus, ClCH₂COCl was aminated and amidated by MeNH₂ and the product maintained at 48h at 25° with NaOMe/MeOH under 40psi NO to give NaON:N(O)NMeCH₂CONHMe. Data for biol. activity of H₂NCH₂CH₂N[NO]NO-CH₂CH₂NH₃⁺ were given in graphic form.

REFERENCE COUNT: 8 THERE ARE 8 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 10 OF 27 CAPLUS COPYRIGHT 2009 ACS on STN
 ACCESSION NUMBER: 1996:357099 CAPLUS
 DOCUMENT NUMBER: 125:26237
 ORIGINAL REFERENCE NO.: 125:4955a, 4958a
 TITLE: Antiviral drugs and immunomodulators containing chelate-forming agents
 INVENTOR(S): Bacanu, Serban Al; Ionescu, Iulian; Sarzea, Sorin;
Tomas, Stefan Teodor
 PATENT ASSIGNEE(S): Medico Pharma Vertriebs GmbH, Germany; Sicomed S.A.
 SOURCE: PCT Int. Appl., 21 pp.
 CODEN: PIXXD2
 DOCUMENT TYPE: Patent
 LANGUAGE: German
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|------|----------|-----------------|--------------|
| WO 9606639 | A2 | 19960307 | WO 1995-EP3426 | 19950831 <-- |
| WO 9606639 | A3 | 19960725 | | |
| W: AM, AT, AU, BB, BG, BR, BY, CA, CH, CN, CZ, DE, DK, EE, ES, FI,
GB, GE, HU, IS, JP, KE, KG, KP, KR, KZ, LK, LR, LT, LU, LV, MD, | | | | |

MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK,
 TJ, TM, TT, UA, UG, US, UZ, VN, BE, FR, GR, IE, IT, MC, NL, BF,
 BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG, SZ
 RW: KE, MW, SD, SZ, UG, AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT,
 LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE,
 SN, TD, TG
 DE 4431175 A1 19960411 DE 1994-4431175 19940901 <--
 AU 9535194 A 19960322 AU 1995-35194 19950831 <--
PRIORITY APPLN. INFO.:
 DE 1994-4431175 A 19940901
 WO 1995-EP3426 W 19950831

AB Combinations of chelate-forming agents and essential amino acids or their derivs. which are optionally complexed with bivalent metal ions are useful as antiviral agents, immunomodulators for treatment of autoimmune diseases, anticancer agents, and drugs for treatment of neurodegenerative diseases. Thus, Rodilemid (CaNa2EDTA/cysteine/Ca gluconate combination) (625 µg/mL) strongly inhibited HIV-1 in cultured MT-4 cells without inhibiting cell growth.
REFERENCE COUNT: 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 11 OF 27 CAPLUS COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER: 1996:694251 CAPLUS
DOCUMENT NUMBER: 125:326402
ORIGINAL REFERENCE NO.: 125:61174h,61175a
TITLE: An immunoreactive conjugate, method for its preparation, antibodies to the conjugate and a pharmaceutical composition and diagnostic device containing them
INVENTOR(S): Maes, Roland
PATENT ASSIGNEE(S): Anda Biologicals S.A., Fr.
SOURCE: Eur. Pat. Appl., 19 pp.
CODEN: EPXXDW
DOCUMENT TYPE: Patent
LANGUAGE: French
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|-----------------------|------|----------|-----------------|--------------|
| EP 736770 | A2 | 19961009 | EP 1996-870042 | 19960401 <-- |
| EP 736770 | A3 | 19970502 | | |
| R: BE, DE, FR, GB, IT | | | | |
| BE 1009230 | A6 | 19970107 | BE 1995-316 | 19950405 <-- |
| BE 1009917 | A6 | 19971104 | BE 1996-113 | 19960208 <-- |

PRIORITY APPLN. INFO.:
 BE 1995-316 A 19950405
 BE 1996-113 A 19960208

AB An immunoreactive conjugate is disclosed which contains 1 or more haptens consisting of a sulphydryl group and one of the following: amino acids, carbohydrates, amino carbohydrates, phosphatidylinositol, sphingosine, and their nitrosoyl, acyl, or acetyl derivs., the haptens being coupled to a protein with a mol. weight >8000 Kd and/or a solid support by a coupling agent capable of binding to the sulphydryl group of the hapten. Thus, NO-cysteine and NO-N-acetyl-L-cysteine conjugates with albumin were prepared, and birds and mammals were vaccinated. IgG and IgM class antibodies specific for N-acetyl-L-cysteine were detected in the subjects. Addnl. analyses demonstrated that many HIV-pos. patients have IgG specific for acetyl-cysteine. Pharmaceutical compns. using these immunoreactive conjugates can be used in the prevention and/or treatment of autoimmunity, AIDS, cancer, tuberculosis and a variety of other diseases.

L4 ANSWER 12 OF 27 CAPLUS COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER: 1996:62493 CAPLUS

DOCUMENT NUMBER: 124:157165
ORIGINAL REFERENCE NO.: 124:28971a,28974a
TITLE: Ring-Opened Adducts of the Anticancer Drug Carboplatin with Sulfur Amino Acids
AUTHOR(S): Barnham, Kevin J.; Djuran, Milos I.; Murdoch, Piedad del Socorro; Ranford, John D.; Sadler, Peter J.
CORPORATE SOURCE: Birkbeck College, University of London, London, WC1H 0PP, UK
SOURCE: Inorganic Chemistry (1996), 35(4), 1065-72
PUBLISHER: American Chemical Society
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Reactions of the anticancer drug carboplatin (Paraplatin) with a variety of sulfur-containing amino acids have been investigated by 1 H and 15 NMR spectroscopy and by HPLC. Thiols react very slowly and sulfur-bridged species containing four-membered Pt₂S₂ rings are the predominant products. In contrast reactions with thioether ligands are much more rapid, and kinetics for the initial stages of the reaction with L-methionine have been determined ($k = 2.7 + 10^{-3}$ M⁻¹ s⁻¹). Surprisingly, very stable ring-opened species are formed such as cis-[Pt(CBDC_A-O)(NH₃)₂(L-HMet-S)] which has a half-life for Met-S,N ring-closure of 28 h at 310 K. A study of the formation of the analogous product for N-acetyl-L-methionine and its subsequent ring closure is reported. Reactions such as these may play a role in the biol. activity of carboplatin.

L4 ANSWER 13 OF 27 MEDLINE on STN
ACCESSION NUMBER: 1995226450 MEDLINE
DOCUMENT NUMBER: PubMed ID: 7711067
TITLE: Isolation and expression of rat thymidylate synthase cDNA: phylogenetic comparison with human and mouse thymidylate synthases.
AUTHOR: Ciesla J; Weiner K X; Weiner R S; Reston J T; Maley G F;
Maley F
CORPORATE SOURCE: Nencki Institute of Experimental Biology, Department of
Cellular Biochemistry, Warsaw, Poland.
CONTRACT NUMBER: CA44355 (United States NCI)
SOURCE: Biochimica et biophysica acta, (1995 Apr 4) Vol.
1261, No. 2, pp. 233-42.
Journal code: 0217513. ISSN: 0006-3002.
PUB. COUNTRY: Netherlands
DOCUMENT TYPE: (COMPARATIVE STUDY)
Journal; Article; (JOURNAL ARTICLE)
(RESEARCH SUPPORT, U.S. GOV'T, NON-P.H.S.)
(RESEARCH SUPPORT, U.S. GOV'T, P.H.S.)
LANGUAGE: English
FILE SEGMENT: Priority Journals
OTHER SOURCE: GENBANK-L12138
ENTRY MONTH: 199505
ENTRY DATE: Entered STN: 24 May 1995
Last Updated on STN: 6 Feb 1998
Entered Medline: 15 May 1995

AB Two cDNA clones representing rat hepatoma thymidylate synthase (rTS) were isolated from a lambda ZAP II cDNA library using as a probe a fragment of the human TS cDNA. The two were identical except that one was missing 50 bp and the other 23 bp corresponding to the 5' coding region of the protein. The missing region was obtained by screening a rat genomic library. The open reading frame of rTS cDNA encoded 921 bp encompassing a protein of 307 amino acids with a calculated molecular mass of 35,015 Da. Rat hepatoma TS appears identical to normal rat thymus TS and the two sequences differ from mouse TS in the same eight amino acid residues. Six of these differences are in the first 21 amino acids from the amino-end.

The human enzyme differed from rat and mouse TS at 17 residues where the latter two were identical, with most changes being conservative in nature. The three species differed completely at only four sites. Because the mouse TS shares four amino acids with human TS at sites which differ from rTS and a comparable situation does not exist between rTS and human TS, it is suggested that mouse TS is closer to human TS phylogenetically than rTS. The polymerase chain reaction was used to subclone the protein coding region of rTS into a high expression vector, which expressed rTS in Escherichia coli to the extent of 10 to 20% of its cellular protein. Although the amino-end of the amplified TS was unblocked, that isolated from a FUdR-resistant rat hepatoma cell line contained mostly N-acetylmethionine on its N-terminal end, a finding that may have significant regulatory consequences, which are discussed. The TS level in the resistant cell line was 60 to 70-fold higher than normal which was found to be associated with both multiple gene copies and an expanded TS mRNA pool.

L4 ANSWER 14 OF 27 CAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 1990:191544 CAPLUS

DOCUMENT NUMBER: 112:191544

ORIGINAL REFERENCE NO.: 112:32184h,32185a

TITLE: Thiol and thioether suppression of cis-platinum-induced nephrotoxicity in rats bearing the Walker 256 carcinosarcoma

AUTHOR(S): Jones, Mark M.; Basinger, Mark A.

CORPORATE SOURCE: Cent. Mol. Toxicol., Vanderbilt Univ., Nashville, TN, 37235, USA

SOURCE: Anticancer Research (1989), 9(6), 1937-41

DOCUMENT TYPE: CODEN: ANTRD4; ISSN: 0250-7005

LANGUAGE: Journal

English

AB An examination of 18 thiols and thio ethers revealed that the simultaneous administration of several of these with cis-platinum (CDDP) at 7.5 mg/kg (25 μ mol/kg) i.v., as a single injection to rats bearing the Walker 256 carcinosarcoma led to significant reduction in the nephrotoxicity typically found with cis-platinum, and no apparent interference in its anti-neoplastic action towards this tumor. The thiols and thiol ethers were administered at a 20-fold molar excess to the CDDP and were combined with the CDDP immediately prior to administration. The most effective compds. in suppressing nephrotoxicity were D-, and L-methionine, Me and Et L-methioninate, and N-acetyl-DL-methionine.

L4 ANSWER 15 OF 27 CAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 1988:542107 CAPLUS

DOCUMENT NUMBER: 109:142107

ORIGINAL REFERENCE NO.: 109:23447a,23450a

TITLE: Nitrogen-14 NMR studies of amine release from platinum anticancer drugs: models and human blood plasma

AUTHOR(S): Norman, Richard E.; Sadler, Peter J.

CORPORATE SOURCE: Dep. Chem., Birkbeck Coll., London, WC1E 6BT, UK

SOURCE: Inorganic Chemistry (1988), 27(20), 3583-7

DOCUMENT TYPE: CODEN: INOCAJ; ISSN: 0020-1669

LANGUAGE: Journal

English

AB The feasibility of using ^{14}N { ^1H } NMR spectroscopy to follow reactions of Pt(II) antitumor drugs under biol. relevant conditions has been investigated. Amine release from cis-PtCl₂(NH₃)₂ upon reaction with both L-methionine and N-acetyl-L-methionine and from PtCl₂(1,2-diaminoethane) on reaction with L-methionine in aqueous solution can be readily detected.

Upon

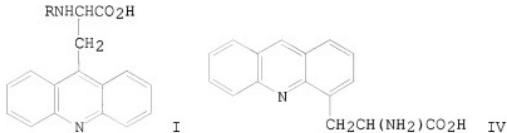
incubation (37° for 24 h) of cis-PtCl₂(NH₃)₂ with human blood plasma supplemented with L-methionine, at least one NH₃ ligand appears to

be lost. Ammonia release is also detected upon addition of excess sodium diethyldithiocarbamate (an agent used clin. to reverse cisplatin toxicity) to plasma incubated with cis-PtCl₂(NH₃)₂ (37° for 2 h). Other 14N peaks assigned in plasma spectra include those for amides, phosphatidylcholines, and N₂. Thus, 14N NMR spectroscopy provides a useful probe for studying these drugs at millimolar concns. under conditions that approach physiol. relevance.

- L4 ANSWER 16 OF 27 CAPLUS COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER: 1989:406348 CAPLUS
DOCUMENT NUMBER: 111:6348
ORIGINAL REFERENCE NO.: 111:1227a, 1230a
TITLE: The effects of dietary alterations of L-arginine, L-methionine, and N-acetyl-L-methionine on the growth of Morris hepatoma #3924A and tumor polyamine levels
AUTHOR(S): Diya, Cornelius Adeniyi
CORPORATE SOURCE: Howard Univ., Washington, DC, USA
SOURCE: (1987) 240 pp. Avail.: Univ. Microfilms Int., Order No. DA8809013
From: Diss. Abstr. Int. B 1989, 49(7), 2573
DOCUMENT TYPE: Dissertation
LANGUAGE: English
AB Unavailable
- L4 ANSWER 17 OF 27 CAPLUS COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER: 1979:570855 CAPLUS
DOCUMENT NUMBER: 91:170855
ORIGINAL REFERENCE NO.: 91:27549a, 27552a
TITLE: Pharmacokinetics of 99mTc-acetylmethionine in tumor-bearing animals
AUTHOR(S): Khachirov, D. G.; Petriev, V. M.; Savin, Yu. I.; Prikhod'ko, A. G.
CORPORATE SOURCE: Nauchno-Issled. Inst. Med. Radiol., Obninsk, USSR
SOURCE: Khimiko-Farmatsevticheskii Zhurnal (1979), 13(8), 33-5
CODEN: KHFZAN; ISSN: 0023-1134
DOCUMENT TYPE: Journal
LANGUAGE: Russian
AB Administration of 99mTc-labeled N-acetyl-DL-methionine (I) (100-50 µCi i.v.) to rats with exptl. induced muscle sarcomas resulted in the accumulation of 99mTc in different organs and tissues for 24 h. The highest accumulation occurred in the liver and kidneys. The 99mTc level in the neoplastic muscles was higher than in the healthy muscles; however, the difference was not statistically significant to justify the use of I for neoplasm scintigraphy. Similar results were obtained with Na99mTcO₄, but the rate of accumulation of the label in the tissues was markedly lower than with I.
- L4 ANSWER 18 OF 27 CAPLUS COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER: 1977:423695 CAPLUS
DOCUMENT NUMBER: 87:233695
ORIGINAL REFERENCE NO.: 87:3773a, 3776a
TITLE: Synthesis and study of β-acridyl-α-alanines and their derivatives
AUTHOR(S): Konyukhov, V. N.; Sakovich, G. S.; Aksanova, T. N.; Bandurina, T. A.; Radina, L. B.; Pushkareva, Z. V.; Lesnaya, N. A.; Barybin, A. S.
CORPORATE SOURCE: Ural. Politekh. Inst. im. Kirova, Sverdlovsk, USSR
SOURCE: Khimiko-Farmatsevticheskii Zhurnal (1976), 10(7), 56-9
CODEN: KHFZAN; ISSN: 0023-1134

DOCUMENT TYPE:
LANGUAGE:
GI

Journal
Russian



AB The acridinylalanine I (R = H) (II) was coupled to Ac-Glu-OH anhydride, Ac-Met-OH, and Ac-Phe by dicyclohexylcarbodiimide to give the appropriate I [R = N-acetyl- α -glutamyl, Ac-Met (III), Ac-Phe]. Substitution reaction of 4-(bromomethyl)acridine with AcNHCH(CO₂Et)₂ and subsequent hydrolysis-decarboxylation gave the acridinylalanine IV. II, the N-oxide of II, and III at a daily dose of 100 mg/kg inhibited the growth of lymphosarcoma 35%, 62%, and 13%, resp.

L4 ANSWER 19 OF 27 CAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 1974:499491 CAPLUS

DOCUMENT NUMBER: 81:99491

ORIGINAL REFERENCE NO.: 81:15713a, 15716a

TITLE: Inhibition of carcinogenic and toxic effects of polycyclic hydrocarbons by several sulfur-containing compounds

AUTHOR(S): Wattenberg, Lee W.

CORPORATE SOURCE: Med. Sch., Univ. Minnesota, Minneapolis, MN, USA

SOURCE: Journal of the National Cancer Institute (1940-1978) (1974), 52(5), 1583-7

CODEN: JNCIAM; ISSN: 0027-8874

DOCUMENT TYPE: Journal

LANGUAGE: English

AB Disulfiram (I) [97-77-8] and benzyl thiocyanate [3012-37-1] (PhCH₂SCN) (0.03 mmole/g) and dimethyldithiocarbamate [79-45-8] (0.06 mmole/g) added to the diet inhibited 7,12-dimethylbenz[a]anthracene (II) [57-97-6]-induced mammary tumor formation and adrenal necrosis in female rats. Single oral administration of I (100 mg) 24 hr prior to II administration also suppressed mammary tumor formation. In the mouse, I prevented the occurrence of tumors of the forestomach that resulted from benzo[a]pyrene [50-32-8] in the diet, but did not affect pulmonary adenoma formation in mice given this carcinogen by oral intubation. Cystine [56-89-3] and L-methionine [63-68-3] and its derivs. were inactive as inhibitors of rat mammary tumors and adrenal necrosis. I had no effect on pulmonary adenoma formation from administration of benzo[a]pyrene by oral intubation in female mice.

L4 ANSWER 20 OF 27 CAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 1970:527221 CAPLUS

DOCUMENT NUMBER: 73:127221

ORIGINAL REFERENCE NO.: 73:20717a, 20720a

TITLE: Analogs of methionine as substrates and inhibitors of the methionine adenosyltransferase reaction.

AUTHOR(S): Deductions concerning the conformation of methionine Lombardini, J. B.; Coulter, A. W.; Talalay, Paul

CORPORATE SOURCE: Sch. of Med., Johns Hopkins Univ., Baltimore, MD, USA
SOURCE: Molecular Pharmacology (1970), 6(5), 481-99
CODEN: MOPMA3; ISSN: 0026-895X
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Steric, electronic, and conformational requirements are described for analogs of L-methionine essential to their function as substrates or inhibitors of the methionine adenosyltransferase reaction (EC 2.4.1.13). With the aid of partially purified transferase preps. from Escherichia coli, bakers' yeast, and rat liver, a systematic study of substrate analogs has been undertaken. Inhibitors of the enzyme fall into 3 categories: (a) straight C chain amino acids, such as L-2-amino-4-hexenoic acid (trans but not the cis isomer) and L-2-amino-4-hexyoic acid, which are the most potent inhibitors; (b) cyclic amino acids, among which 1-aminocyclopentanecarboxylic acid and 1 of the 4 isomers of 1-amino-3-methylcyclopentanecarboxylic acid (either the 1R, 3R or the 1S, 3R isomer) are the most powerful; and (c) O-acetyl-L-serine, O-carbamoyl-L-serine, and S-carbamoyl-L-cysteine. Since inhibitors belonging to groups a and b possess considerable conformational rigidity by virtue of the presence of unsatns. or cyclic structures, it has been possible to draw conclusions with respect to the conformation of L-methionine at the active site of the adenosyltransferase reaction. A number of the inhibitors of the methionine adenosyltransferase reaction, such as 1-aminocyclopentanecarboxylic acid and S-carbamoyl-L-cysteine, are known to be inhibitors of the growth of certain microorganisms and tumors. The possibility is suggested that these inhibitory activities may be mediated at least in part through the inhibition of the synthesis of S-adenosyl-L-methionine.

L4 ANSWER 21 OF 27 CAPLUS COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER: 1971:436607 CAPLUS
DOCUMENT NUMBER: 75:36607
ORIGINAL REFERENCE NO.: 75:5801a,5804a
TITLE: Data on the chemical structure and biological activity of hydrazides and hydrazone in a series of natural amino acids
AUTHOR(S): Khvorova, N. M.; Pushkareva, Z. V.; Radina, L. B.; Volovel'skii, L. N.; Sof'ina, Z. P.; Aglitskaya, K. V.
CORPORATE SOURCE: Ural. Politekh. Inst., Sverdlovsk, USSR
SOURCE: Puti Sintese i Izyskaniya Protivoopukholevykh Preparatov (1970), Volume Date 1968, No. 3, 113-20
CODEN: PSIPA4; ISSN: 0370-1913
DOCUMENT TYPE: Journal
LANGUAGE: Russian
AB RCH(NHAC)CONHN:CHR1, (I) ($R = PhCH_2$, $p-HOC_6H_4CH_2$, $MeS(CH_2)_2$, $RICH:NNHCO(CH_2)_2$, or indol-3-ylmethyl; $R1 = 3,4-(HO)_2C_6H_3$ or $3,4-HO_2C(HO)C_6H_3$) exist in solution and in the solid state as hydrazones and not as azo forms. I (same R; $R1 =$ gluco-pentahydroxypentyl or ribo-tetrahydroxybutyl) exist in the solid state in the pyranose or furanose form, but in solution an equilibrium exists with the acyclic form. Moderate antitumor properties were shown by the [$p-[bis(\beta-chloroethyl)amino]benzylidene]hydrazide$ of N-acetyltryptophan and by the glucosylidenehydrazides of N-acetylmethionine and glutamic acid.

L4 ANSWER 22 OF 27 CAPLUS COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER: 1961:14594 CAPLUS
DOCUMENT NUMBER: 55:14594
ORIGINAL REFERENCE NO.: 55:2900h-i
TITLE: Antitumor effect of amino acid analogs
AUTHOR(S): Abe, Mihoko; Chibata, Ichiro; Hirokawa, Hideo; Kameda,

SOURCE: Yukio; Mizuno, Denichi
Yakugaku Zasshi (1960), 80, 1309-11
CODEN: YKZAJ; ISSN: 0031-6903

DOCUMENT TYPE: Journal
LANGUAGE: Unavailable

AB Some methionine analogs which had a marked effect against the solid type Ehrlich ascites carcinoma in mice included L-RCH(NHC₂CH₂C₁)CO₂H (R = MeSCH₂CH₂); RCH(NHC₂CH₂C₁)CO₂H; RCH(NHAc)CN; RCH(NHC₂CH₂C₁)CN; RCH(NHC₂NH₂.HCl)CN; EtSCH₂CH₂CH(NH₂.1/2H₂SO₄)CN; EtSCH₂CH₂CH(NHC₂C₁)CN.

L4 ANSWER 23 OF 27 CAPLUS COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER: 1961:44317 CAPLUS
DOCUMENT NUMBER: 55:44317
ORIGINAL REFERENCE NO.: 55:8609c-e

TITLE: Acylase activity in the liver of rats fed 4-dimethylaminoazobenzene
AUTHOR(S): Kishi, Sanji; Haruno, Katsuhiko; Asano, Bunichi
CORPORATE SOURCE: Showa Med. School, Tokyo
SOURCE: Gann (1960), 51, 235-41
CODEN: GANNA2; ISSN: 0016-450X

DOCUMENT TYPE: Journal
LANGUAGE: Unavailable

AB Activity of acylase in the liver of rats fed 4-dimethylaminoazobenzene (DAB) was measured by using as substrates acetanilide (AA), diacetyl-L-tyrosine (DAT), and acetylmethionine (AM). Activity of acylase for AA in the slightly cirrhotic liver was higher than that in normal liver, and even a severe case showed nearly the normal value, whereas the activity in hepatoma was scarcely detected. When DAT was used for acylase test, pathol. changed livers, including hepatoma, showed higher activity than normal liver. Acylase activity on AM was slightly higher than normal in the pathol. but noncancerous livers. Hepatoma showed 60% of the normal value. The liver of DAB-treated rats in the 4th week of experiment showed higher activity than normal when tested with AA, DAT, or AM. With regenerating liver the activity diminished to about half that of the excised portion of the same liver.

L4 ANSWER 24 OF 27 CAPLUS COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER: 1961:44316 CAPLUS
DOCUMENT NUMBER: 55:44316
ORIGINAL REFERENCE NO.: 55:8608i,8609a-c

TITLE: The effect of toxohormone on iron metabolism
AUTHOR(S): Ono, Tetsuo; Ohashi, Mochihiko; Yago, Nagasumi
CORPORATE SOURCE: Japanese Foundation Cancer Research, Tokyo
SOURCE: Gann (1960), 51, 213-21
CODEN: GANNA2; ISSN: 0016-450X

DOCUMENT TYPE: Journal
LANGUAGE: Unavailable

AB In these expts. there were used 4 kinds of toxohormone (I) preps., which varied in the extraction procedures and activities, all obtained from rat fibrosarcoma. One of them, T-fraction, was Nakahara and Fukuoka's EtOH precipitate, the second one, a-fraction, was a fraction adsorbed on Ca phosphate gel from the H₂O extract of tumor tissues, the third, PSa-fraction, was prepared in the same way as a-fraction by Ca phosphate gel adsorption but from the boiled supernatant of tumor homogenate after removing a-fraction, and the last one, a-CM-fraction, the most active in catalase-depressing action among these 4 preps., was the fraction purified by carboxymethylcellulose column chromatography from a-fraction. All were shown to decrease plasma Fe level of rats. The order of magnitude of this activity was the same as that established for their liver catalase-depressing activity. By using Fe-labeled plasma, it

appeared that the lowering of Fe mobilization from the tissue reserve may be the most probable mechanism for action of toxohormone in decreasing plasma Fe.

L4 ANSWER 25 OF 27 CAPLUS COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER: 1960:67887 CAPLUS
DOCUMENT NUMBER: 54:67887
ORIGINAL REFERENCE NO.: 54:12998h-i,12999a
TITLE: α -Acylamino- γ -methylthiobutyronitrile
INVENTOR(S): Yamada, Shunichi; Chibata, Ichiro
PATENT ASSIGNEE(S): Tanabe Drug Manufg. Co.
DOCUMENT TYPE: Patent
LANGUAGE: Unavailable
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|-------------|------|----------|-----------------|------|
| JP 34003311 | B4 | 19590504 | JP | <-- |

AB To 6.5 g. α -amino- γ -methylthiobutyronitrile in 20 cc. AcOH was dropped 6.1 g. Ac2O during 30 min., the mixture stirred at 45-50° 4 hrs., concentrated in vacuo, to the residue added small amount of H2O, and the precipitated mass recrystd. from dilute EtOH to give 71% α -acetylamino- γ -methylthiobutyronitrile, plates, m. 47-9°. Similarly were prepared α -chloroacetylamino- γ -methylthiobutyronitrile, columns, m. 60-3°, and α -glycylamino- γ -methylthiobutyronitrile; hydrochloride m. 132-5°. The products exhibited inhibiting activities for cancer and virus.

L4 ANSWER 26 OF 27 CAPLUS COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER: 1961:14595 CAPLUS
DOCUMENT NUMBER: 55:14595
ORIGINAL REFERENCE NO.: 55:29001,2901a
TITLE: Feeding of surface-active substances and effect on infections
AUTHOR(S): Borneff, J.
SOURCE: Archiv fuer Hygiene und Bakteriologie (1957)
, 141, 578-95
From: C.Z. 1958, 10135.
CODEN: AHBAAM; ISSN: 0003-9144
DOCUMENT TYPE: Journal
LANGUAGE: Unavailable

AB Hostapon (I) and Pril (II), surface-active materials, were given to guinea pigs and mice. I was given in high dose, II in normal dose corresponding to a possible human dose. No toxic effects were found at a level of 325 mg./kg./day, and no effect was found on enteral bacterial flora. Harmful effects were found only with concurrent streptococcal infection and treatment with I or II.

L4 ANSWER 27 OF 27 CAPLUS COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER: 1958:67871 CAPLUS
DOCUMENT NUMBER: 52:67871
ORIGINAL REFERENCE NO.: 52:12216e-f
TITLE: Behavior of blood glutathione in gastric patients after insulin treatment
AUTHOR(S): Musebeck, Klaus
CORPORATE SOURCE: Med. Akad., Dresden, Germany
SOURCE: Arztl. Forsch. (1957), 11, 313-16
DOCUMENT TYPE: Journal
LANGUAGE: Unavailable
AB Although insulin produced within 10 min. a transient increase in

glutathione blood level (I) in healthy controls, 20 I.U. of insulin intravenously lowered I in patients with gastric or duodenal ulcer, or with cancer of the stomach. Resection gave no change in the I response to insulin, but after surgical removal of the ulcer, patients gave a normal response. Injection of thiomedon produced no effect in either controls or patients.

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NEWS 16 DEC 02 USGENE: Enhanced coverage of bibliographic and sequence information
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NEWS 21 FEB 16 Derwent World Patents Index (DWPI) Revises Indexing of Author Abstracts

NEWS 22 FEB 16 New FASTA Display Formats Added to USGENE and PCTGEN
NEWS 23 FEB 16 INPADOCDB and INPAFAMDB Enriched with New Content and Features
NEWS 24 FEB 16 INSPEC Adding Its Own IPC codes and Author's E-mail Addresses

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=> s (alphaketoglutaric or alpha ketoglutaric) and (?furfural or dehydroascorbic or malt or vanillin)
L1 53 (ALPHAKETOGLUTARIC OR ALPHA KETOGLUTARIC) AND (?FURFURAL OR DEHYDROASCORBIC OR MALT OR VANILLIN)

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=> dup rem l1  
PROCESSING COMPLETED FOR L1  
L2          47 DUPS REM L1 (6 DUBLICATES REMOVED)
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=> s 12 and (cancer or tumor or neoplasm)

=> d 13 ibib abs 1-
YOU HAVE REQUESTED DATA FROM 5 ANSWERS - CONTINUE? Y/(N):

-2- d. 13. ikit abz. 1. E

→ a 15 1515 ass 1 3

ES ANSWER 1 OF 5 CAFLOS COPYRIGHT 2010 ACS ON SIN

ACCESSION NUMBER: 2010:195517 CAPLUS
TITLE: Simultaneous quantitative determination of alpha.-ketoglutaric acid and 5-hydroxymethylfurfural in human plasma by gas chromatography-mass spectrometry

AUTHOR(S): Wagner, Bernhard M.; Donnarumma, Fabrizio; Wintersteiger, Reinhold; Windischhofer, Werner; Leis, Hans J.

CORPORATE SOURCE: Research Unit of Osteology and Analytical Mass Spectrometry, University Children's Hospital, Medical University Graz, Graz, 8036, Austria

SOURCE: Analytical and Bioanalytical Chemistry (2010), 396(7), 2629-2637

CODEN: ABCNBP; ISSN: 1618-2642

PUBLISHER: Springer

DOCUMENT TYPE: Journal

LANGUAGE: English

AB α -Ketoglutaric acid (α -KG) and 5-hydroxymethylfurfural (5-HMF) are currently under investigation as promising cancer cell damaging agents. A method for the simultaneous quant. determination of α -KG and 5-HMF in human plasma was established for screening these compds. in human plasma. Plasma samples were directly treated with O-(2,3,4,5,6-pentafluorobenzyl) hydroxylamine hydrochloride to form the corresponding oximes, thus facilitating subsequent liquid-liquid extraction. After formation of the trimethylsilyl ethers, samples were analyzed by gas chromatog. with electron ionization mass spectrometry. Stable isotope labeled stds. were used, the preparation of ^{13}C 6-5-HMF is described. Limits of quantitation were set to 0.938 $\mu\text{g}/\text{mL}$ for α -KG and 0.156 $\mu\text{g}/\text{mL}$ for 5-HMF. Inter-day accuracy was $\leq 93.7\%$ (α -KG) and $\leq 92.8\%$ (5-HMF). Inter-day precision was $\leq 6.0\%$ (α -KG) and $\leq 4.6\%$ (5-HMF). The method has been successfully applied to pharmacokinetic profiling of the compds. after i.v. application.

REFERENCE COUNT: 19 THERE ARE 19 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L3 ANSWER 2 OF 5 CAPLUS COPYRIGHT 2010 ACS on STN
ACCESSION NUMBER: 2006:1326164 CAPLUS
DOCUMENT NUMBER: 146:134507
TITLE: Development and validation of a liquid chromatographic method for the determination of hydroxymethylfurfural and alpha-ketoglutaric acid in human plasma

AUTHOR(S): Michail, K.; Juan, H.; Maier, A.; Matzi, V.; Greilberger, J.; Wintersteiger, R.

CORPORATE SOURCE: Institute of Pharmaceutical Sciences, University of Graz, Austria

SOURCE: Analytica Chimica Acta (2007), 581(2), 287-297

CODEN: ACACAM; ISSN: 0003-2670

PUBLISHER: Elsevier B.V.

DOCUMENT TYPE: Journal

LANGUAGE: English

AB Hydroxymethylfurfural (HMF) and alpha-ketoglutaric acid (KG) have been recently investigated as potential cancer cell damaging agents. We herein report for the first time a validated quant. assay for their simultaneous determination in human plasma which is amenable to be applied in the future screening of the target compds. in human probands in order to properly design a targeted chemotherapeutic regimen for certain types of malignant tumors. A simple liquid chromatog. method in conjunction to derivatization after a

two-step optimized solid phase clean-up procedure is described. The method is based on the reaction of HMF and KG with 2-nitrophenylhydrazine or 2,4-dinitrophenylhydrazine in an aqueous environment. Reaction conditions were studied with respect to pH, reagent volume, reaction temperature and time. Exact testing of such parameters beside careful selection of the mobile phase composition rendered feasible the quantification of the chemical significantly differing analytes along a single chromatog. run. The formed derivs. could be separated isocratically by reversed-phase LC on a C8-column. Detection in the UV and in the visible range is possible. Results showed good recovery and reproducibility with detection limits ($S/N = 3$) down to 2 pmol analyte on column. Resolution of the syn and anti geometric isomers of the HMF and KG derivs. is possible. The isomeric ratio in relation to the reaction pH is discussed.

OS.CITING REF COUNT: 4 THERE ARE 4 CAPLUS RECORDS THAT CITE THIS RECORD
(4 CITINGS)
REFERENCE COUNT: 46 THERE ARE 46 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L3 ANSWER 3 OF 5 CAPLUS COPYRIGHT 2010 ACS on STN
ACCESSION NUMBER: 2004:467738 CAPLUS
DOCUMENT NUMBER: 141:17591
TITLE: Agent having a destructive effect on malignant tumors and method for the production
INVENTOR(S): Groke, Karl; Herwig, Ralf
PATENT ASSIGNEE(S): C.Y.L. Handelsges. m.b.H., Austria; Ferdinand, Peter
SOURCE: PCT Int. Appl., 35 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: German
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|------|----------|-----------------|------------|
| WO 2004047832 | A1 | 20040610 | WO 2003-EP50712 | 20031013 |
| W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW | | | | |
| RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG | | | | |
| AT 2002001778 | A | 20040815 | AT 2002-1778 | 20021127 |
| AT 412447 | B | 20050325 | | |
| CA 2507273 | A1 | 20040610 | CA 2003-2507273 | 20031013 |
| AU 2003285351 | A1 | 20040618 | AU 2003-285351 | 20031013 |
| EP 1565176 | A1 | 20050824 | EP 2003-778338 | 20031013 |
| EP 1565176 | B1 | 20060524 | | |
| R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK | | | | |
| JP 2006508998 | T | 20060316 | JP 2004-554531 | 20031013 |
| AT 326958 | T | 20060615 | AT 2003-778338 | 20031013 |
| PT 1565176 | E | 20061031 | PT 2003-778338 | 20031013 |
| ES 2268452 | T3 | 20070316 | ES 2003-778338 | 20031013 |
| US 20060292218 | A1 | 20061228 | US 2006-536777 | 20060907 |
| PRIORITY APPLN. INFO.: | | | AT 2002-1778 | A 20021127 |
| | | | EP 2003-778338 | A 20031013 |
| | | | WO 2003-EP50712 | W 20031013 |

ASSIGNMENT HISTORY FOR US PATENT AVAILABLE IN LSUS DISPLAY FORMAT

AB Disclosed is an agent which has a destructive effect on malignant tumors and contains alpha-ketoglutaric acid, N-acetyl-seleno-L-methionine, N-acetyl-L-methionine, and a compound that is capable of forming azomethine and is selected among the group 5-hydroxymethylfurfural, dehydroascorbic acid, maltol, and vanillin as an active substance, 5-hydroxymethylfurfural being preferred. The inventive agent can be used in the form of an infusion, in an oral or rectal form of administration, or as an irrigation in cancer therapy. The treatment of cancer patients with the following infusion solution is reported: α -ketoglutaric acid 9.0 g/L; 5-hydroxymethyl furfural 3.0 g/L; N-acetyl-seleno-L-methionine 2.0 mg/L; N-acetyl-L-methionine 100.00 mg/L; glucose 30.0 g/L; sodium and potassium ions to set pH.
OS.CITING REF COUNT: 1 THERE ARE 1 CAPLUS RECORDS THAT CITE THIS RECORD (1 CITINGS)
REFERENCE COUNT: 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L3 ANSWER 4 OF 5 CAPLUS COPYRIGHT 2010 ACS on STN
ACCESSION NUMBER: 1990:434696 CAPLUS
DOCUMENT NUMBER: 113:34696
ORIGINAL REFERENCE NO.: 113:5777a, 5780a
TITLE: Neoplasm inhibitor comprising .alpha.-ketoglutaric acid and azomethine-forming compounds
INVENTOR(S): Groke, Karl; Miggitsch, Hans; Musil, Horst; Polzer, Josef
PATENT ASSIGNEE(S): Leopold und Co. Chem. Pharm. Fabrik G.m.b.H., Austria
SOURCE: Eur. Pat. Appl., 12 pp.
CODEN: EPXXDW
DOCUMENT TYPE: Patent
LANGUAGE: German
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|------|----------|-----------------|------------|
| EP 326826 | A1 | 19890809 | EP 1989-100493 | 19890112 |
| EP 326826 | B1 | 19920325 | | |
| R: AT, BE, CH, DE, ES, FR, GB, GR, IT, LI, LU, NL, SE
AT 8800218 | | | | |
| AT 393221 | A | 19910215 | AT 1988-218 | 19880203 |
| AT 74006 | B | 19910910 | | |
| AT 74006 | T | 19920415 | AT 1989-100493 | 19890112 |
| ES 2033021 | T3 | 19930301 | ES 1989-100493 | 19890112 |
| US 5006551 | A | 19910409 | US 1989-301035 | 19890124 |
| JP 01226810 | A | 19890911 | JP 1989-22747 | 19890202 |
| DK 8900470 | A | 19890915 | DK 1989-470 | 19890202 |
| PRIORITY APPLN. INFO.: | | | AT 1988-218 | A 19880203 |
| | | | EP 1989-100493 | A 19890112 |

ASSIGNMENT HISTORY FOR US PATENT AVAILABLE IN LSUS DISPLAY FORMAT

AB Neoplasm inhibitor comprise α -ketoglutaric acid (I) and compd(s). capable of forming azomethine bonds, such as 5-hydroxymethylfurfural (II), dehydroascorbic acid, maltol and vanillin. The latter compds. stimulate I enrichment by tumors. The compns. also comprise electrolytes and sugar and may be administered as infusions, or orally, rectally, as ointments, etc. An infusion solution comprised I 6.000, II 2.000, CaCl₂.2H₂O 0.588, KOH (85%) 1.320, MgCl₂.6H₂O 0.813, NaOH 1.200, Na glycerophosphate 6.122, ZnCl₂ 0.010, and glucose 50.000 g/L. The infusion, administered daily at 0.5 L for 16 days caused total regression of prostate carcinoma and lung metastases in a patient.

OS.CITING REF COUNT: 8 THERE ARE 8 CAPLUS RECORDS THAT CITE THIS RECORD

(8 CITINGS)

L3 ANSWER 5 OF 5 MEDLINE on STN
ACCESSION NUMBER: 2007598157 MEDLINE
DOCUMENT NUMBER: PubMed ID: 17768058
TITLE: The impact of preoperative micronutrient supplementation in lung surgery. A prospective randomized trial of oral supplementation of combined alpha-ketoglutaric acid and 5-hydroxymethylfurfural.
AUTHOR: Matzi Veronika; Lindenmann Joerg; Muench Andreas; Greilberger Joachim; Juan Heinz; Wintersteiger Reinhard; Maier Alfred; Smolle-Juettner Freyja Maria
CORPORATE SOURCE: Department of Surgery, Division of Thoracic and Hyperbaric Surgery, Medical University Graz, Graz, Austria.
SOURCE: European journal of cardio-thoracic surgery : official journal of the European Association for Cardio-thoracic Surgery, (2007 Nov) Vol. 32, No. 5, pp. 776-82. Electronic Publication: 2007-09-04.
PUB. COUNTRY: Germany: Germany, Federal Republic of
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
(RANDOMIZED CONTROLLED TRIAL)
(RESEARCH SUPPORT, NON-U.S. GOV'T)
(CLINICAL TRIAL)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 200802
ENTRY DATE: Entered STN: 10 Oct 2007
Last Updated on STN: 29 Feb 2008
Entered Medline: 28 Feb 2008
AB OBJECTIVE: Preoperative micronutrient supplementation in fast-track surgery programs have shown to reduce complications, shorten recovery, and thereby lower costs. In a prospective randomized study, the metabolic effects of a combination of alpha-ketoglutaric acid (alpha-KG) and 5-hydroxymethylfurfural (5-HMF) were evaluated concerning their impact on improvement of exercise capacity and reduction of oxidative stress in lung surgery. METHODS: Thirty-two consecutive patients admitted for lung resection due to NSCLC were randomized to the study protocol. All patients received preoperative nutritional guidelines according to general recommendations. In 16 (study group), a supplementation of 7.2g alpha-KG and 720 mg 5-HMF/day (SANOPAL) was administered from days 1 to 10. Spiroergometric evaluation was carried out at baseline and day 10 after micronutrient supplementation. Blood samples for the determination of oxidative stress, i.e. carbonyl proteins (CPs) and isoprostanes (IPs) were taken on at baseline, in the operating room just before resection treatment, and 25 min after single lung ventilation (SLV). RESULTS: Spiroergometric re-evaluation showed a significant increase of VO₂max ($p=0.0108$) and Watt's ($p=0.011$) in favor of the study group. Determination of oxidative stress showed a significant reduction of CPs before ($p=0.048$) and after SLV ($p=0.0001$) for the study group compared to the control group. The same is true for IPs before ($p=0.003$) and after SLV ($p=0.02$). Hospitalization and intensive care unit (ICU) of the study group showed a significant reduction compared to the control group ($p=0.03$ and $p=0.02$, respectively). CONCLUSIONS: Simple oral supplementation using a combination of alpha-KG and 5-HMF of preoperative micronutrition may therefore be one further step in a multimodality approach of fast-track surgery programs also in lung surgery.

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